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ABSTRACT

Basic issues concerning interpretive research, and theories and methods of using interpretive research to study teaching are discussed. The concept of interpretive research may also be known as ethnographic, qualitative, participant observational, case study, symbolic interactionist, phenomenological, or constructivist. Interpretive research studies the meaning of actions that occur, both in face-to-face interactions and in the wider society surrounding the immediate scene of action. To conduct interpretive research on teaching, intense and long-term participant observation in an educational setting is required, followed by deliberate and long-term reflection on what was observed. Questions regarding the observer's point of view, previously learned formal theories, cultural conditioning, and personal values must be considered. Attitudes toward teaching and learning as well as measures of effectiveness are also worth examining. This paper argues that such detailed scrutiny of everyday teaching routines is a route to improving educational practice, as performed by university researchers as well as practicing teachers. (GDC)

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QUALITATIVE METHODS IN RESEARCH ON TEACHING

Frederick Erickson

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Frederick Erickson

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Abstract

This paper reviews basic issues of theory and method in approaches to research on teaching that are alternately called ethnographic, qualitative, participant observational, case study, symbolic interactionist, phenomenological, constructivist, and interpretive. The central questions of interpretive research concern issues of implicit and explicit choice and meaning from the points of view of actors in social life, regarding the actions they take in everyday life. Interpretive research is concerned with the concrete specifics of meaning and of action that take place both in immediate scenes of face-to-face interaction and in the wider society surrounding the immediate scene of action. The conduct of interpretive research on teaching involves intense and ideally long-term participant observation in an educational setting, followed by deliberate and long-term reflection on what was seen there. That reflection involves the observer's deliberate and critical scrutiny of his/her interpretive point of view and its sources in formal theory, culturally learned ways of seeing, and personal value commitments. The reflection also involves critical scrutiny, of a friendly sort, of the assumptions about meaning held by those studied, including assumptions about desirable ends and means of teaching and learning, and definitions and measures of effectiveness of teachers and students. The paper argues that such detailed scrutiny of the routines of everyday life in teaching, and such deliberate reflection on its ends and means, are a route to the improvement of practice, not only through the work of university-based interpretive researchers, but through the interpretive documentation and reflection that can and should be done by practicing teachers.

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QUALITATIVE METHODS IN RESEARCH ON TEACHING

Frederick Erickson

> General and abstract ideas are the source of the greatest errors of mankind.
>
> (J. J. Rousseau)

> What is General Nature? is there such a Thing?
> What is General Knowledge? is there such a Thing?
> Strictly Speaking All Knowledge is Particular.
>
> (W. Blake)

This paper reviews basic issues of theory and method in approaches to research on teaching that are alternatively called ethnographic, qualitative, participant observational, case study, symbolic interactionist, phenomenological, constructivist, or interpretive. These approaches are all slightly different, but each bears strong family resemblance to the others.

This set of related approaches emerged as significant in the field of research on teaching in the 1960s in England and in the 1970s in the United States, Australia, New Zealand, and Germany. Because interest in these approaches is so recent, the previous editions of the *Handbook of Research on Teaching* do not contain a chapter devoted to participant observational

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This paper will appear as a chapter in M.C. Wittrock (Ed.), (in press). *Handbook of Research on Teaching* (3rd ed.). New York: Macmillan.

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research. Accordingly this paper attempts to describe research methods and their theoretical presuppositions in considerable detail and does not attempt an exhaustive review of the rapidly growing literature in the field. Such a review will be appropriate for the next edition of the *Handbook.*

From this point on I will use the term *interpretive* to refer to the whole family of approaches to participant observational research. I adopt this term for three reasons: (a) it is more inclusive than many of the others (e.g., ethnography, case study); (b) it avoids the connotation of defining these approaches as essentially nonquantitative (a connotation that is carried by the term *qualitative*), since quantification of particular sorts can often be employed in the work; and (c) it points to the key feature of family resemblance among the various approaches--central research interest in human meaning in social life and in its elucidation and exposition by the researcher.

The issue of using as a basic validity criterion the *immediate and local meanings of actions*, as defined from the actors' points of view, is crucial in distinguishing interpretive participant observational research from another observational technique with which interpretive research approaches are often confused, so-called *rich description.* Since the last decades of the 19th century, the data-collection technique of continuous narrative description--a play-by-play account of what an observer sees observed persons doing--has been used in social and behavioral research. The technique was first used by psychologists in child study and then by anthropologists and sociologists doing community studies.

It is important to emphasize at the outset that the use of continuous narrative description as a technique--what can less formally be called "writing like crazy"--does not necessarily mean that the research being conducted is interpretive or qualitative in a fundamental sense. What makes such work interpretive or qualitative is a matter of substantive focus and

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intent, rather than of procedure in data collection, that is, a research *technique* does not constitute a research *method*. The technique of continuous narrative description can be used by researchers with a positivist and behaviorist orientation that deliberately excludes from research interest the immediate meanings of actions from the actors' points of view. Continuous narrative description can also be used by researchers with a nonpositivist, interpretive orientation, in which the immediate (often intuitive) meanings of actions to the actors involved are of central interest. The presuppositions and conclusions of these two types of research are very different, and the content of the narrative description that is written differs as well. If two observers with these differing orientations were placed in the same spot to observe what was ostensibly the same behavior performed by the same individuals, the observers would write substantively differing accounts of what had happened, choosing differing kinds of verbs, nouns, adverbs, and adjectives to characterize the actions described.

The reader should note that in making these assertions I am taking a different position from Green and Evertson (see their chapter in Wittrock, in press), who emphasize certain commonalities across various approaches to direct observation. Their comprehensive review of a wide range of methods of classroom observation (including some of the methods discussed here) does not emphasize the discontinuities in theoretical presupposition that obtain across the two major types of approaches to classroom research, positivist/behaviorist and interpretive. This paper emphasizes those discontinuities. Green and Evertson are relatively optimistic about the possibility of combining disparate methods and orientations in classroom observation. I am more pessimistic about that possibility and have become increasingly so in the last few years. Reasonable people can disagree on such matters. The reader should compare their chapter to this paper, keeping in mind the differences in perspective that characterize our two discussions, which run along lines that are somewhat similar but are nonetheless distinct.

From my point of view, the primary significance of interpretive approaches to research on teaching concerns issues of content rather than issues of procedure. Interests in interpretive content lead the researcher to search for methods that will be appropriate for study of that content. If interpretive research on classroom teaching is to play a significant role in educational research, it will be because of what interpretive research has to say about its central substantive concerns: (a) the nature of classrooms as socially and culturally organized environments for learning, (b) the nature of teaching as one, *but only one*, aspect of the reflexive learning environment, and (c) the nature (and content) of the meaning-perspectives of teacher and learner as intrinsic to the educational process. The theoretical conceptions that define the primary phenomena of interest in the interpretive study of teaching are very different from those that underlie the earlier, mainstream approaches to the study of teaching. These distinctive features of the interpretive perspective will be considered throughout this essay.

This is not quite to say that this is a situation of competing paradigms in research on teaching, if paradigms are thought of in the sense used by Kuhn (1962) to refer to an integrated set of theoretical presuppositions that lead the researcher to see the world of his/her research interest in a particular way. A paradigm is metaphysical. A scientific theoretical view, according to Kuhn, becomes in practical usage an ontology. The current conflict in research on teaching is not one of competing paradigms, I would argue, not because the competing views do not differ ontologically, but simply because paradigms do not actually compete in scientific discourse. (Lakatos (1978) and others have argued this for the natural sciences--and especially for the social sciences.) Old paradigms are rarely replaced by falsification. Rather, the older and the newer paradigms tend to coexist, as in the survival of Newtonian physics, which can be used for some purposes, despite the competition of Einsteinian physics, which for other purposes has superseded it. Especially in the social sciences, paradigms don't die; they develop varicose veins and get fitted with cardiac pacemakers. The perspective of standard research on teaching and the interpretive perspective are indeed rival theories--rival research programs--even if it is unlikely that the latter will totally supersede the former.

I have not attempted a comprehensive review of the field, nor have I attempted to present a modal perspective on interpretive research. There is much disagreement among interpretive researchers about the proper conduct of their work and its theoretical foundations. Given this lack of consensus, which is greater than that in the more standard approaches to research on teaching, it would be inappropriate for me to attempt to speak on behalf of all interpretive researchers. Accordingly, this paper emphasizes those aspects of theory and method that are most salient in my own work. In substance, my work is an attempt to combine close analysis of fine details of behavior and meaning in everyday social interaction with analysis of the wider societal context--the field of broader social influences--within which the face-to-face interaction takes place. In method, my work is an attempt to be empirical without being positivist, to be rigorous and systematic in investigating the slippery phenomena of everyday interaction and its connections with the wider social world through the medium of subjective meaning.

This first section is an overview of interpretive approaches and the kinds of research questions that are of central interest in such work. The next section reviews the intellectual roots of interpretive research, the development of firsthand participant observation as a research method, and the underpinnings of that development in particular kinds of social theory and practical concern. The third section traces the implications of this general theoretical orientation for the study of classroom teaching. Then the discussion turns to consider issues of method. There is a section on data collection and analysis and a section on data analysis and the preparation of written reports. These sections will address the reasons that data analysis inheres in the data collection phase of research as well as in the reporting phase. The chapter concludes with a discussion of implications of interpretive approaches for future research on teaching.

Overview of Interpretive Approaches and Research Questions of Central Interest

Interpretive, participant-observational fieldwork has been used in the social sciences as a research method for about 70 years. Fieldwork research involves (a) intensive, long-term participation in a field setting; (b) careful recording of what happens in the setting by writing field notes and collecting other kinds of documentary evidence (e.g. memos, records, examples of student work, audiotapes, videotapes); (c) subsequent analytic reflection on the documentary record obtained in the field; and (d) reporting by means of detailed description using narrative vignettes and direct quotes from interviews as well as by more general description in the form of analytic charts, summary tables, and descriptive statistics. Interpretive fieldwork research involves being unusually thorough and reflective in noticing and describing everyday events in the field setting and in attempting to identify the significance of actions in the events from the various points of view of the actors themselves.

Fieldwork methods are sometimes thought to be radically inductive, but that is a misleading characterization. It is true that specific categories for observation are not determined in advance of entering the field setting as a participant observer. It is also true that the researcher always identifies conceptual issues of research interest before entering the field setting. In fieldwork, induction and deduction are in constant dialogue. As a result, the researcher pursues deliberate lines of inquiry while in the field, even though the specific terms of inquiry may change in response to the distinctive character of events in the field setting. The specific terms of inquiry may also be reconstrued in response to changes in the fieldworker's perceptions and understandings of events and their organization during the time spent in the field.

Interpretive methods using participant-observational fieldwork are most appropriate when one needs to know more about the following:

1. The specific structure of occurrences rather than their general character and overall distribution. (What does the decision to leave teaching as a profession look like for the particular teachers involved?) What is happening in a particular place rather than across a number of places? (If survey data indicate that the rate of leaving teaching was lowest in a particular American city, researchers might first want to know what was going on there before looking at other cities with average teacher leaving rates.)

2. The meaning-perspectives of the particular actors in the particular events. (What, specifically, were the points of view of particular teachers as they made their decisions to leave teaching?)

3. The location of naturally occurring points of contrast that can be observed as natural experiments when researchers are unable logistically or ethically to meet experimental conditions of consistency of intervention and of control over other influences on the setting. (Researchers can't hold constant the conditions that might influence teachers to want to leave teaching, and researchers can't try to cause them to want to leave.)

4. The identification of specific causal linkages that were not identified by experimental methods, and the development of new theories about causes and other influences on the patterns that are identified in survey data or experiments.

Fieldwork is best at answering the following questions (on these questions, and the ensuing discussion, see Erickson, Florio, & Buschman, 1980, of which these remarks are a paraphrase):

1. What is happening, specifically, in social action that takes place in this particular setting?

2. What do these actions mean to the actors involved in

them, at the moment the actions took place?

3. How are the happenings organized, in patterns of social organization and learned cultural principles for the conduct of everyday life--how, in other words, are people in the immediate setting consistently present to each other as environments for one another's meaningful actions?

4. How is what is happening in this setting as a whole (i.e., the classroom) related to happenings at other system levels outside and inside the setting (e.g., the school building, a child's family, the school system, federal government mandates regarding mainstreaming)?

5. How do the ways everyday life in this setting is organized compare with other ways of organizing social life in a wide range of settings in other places and at other times?

Answers to such questions are often needed in educational research. They are needed for five reasons.

The first reason concerns the invisibility of everyday life. "What is happening here?" may seem a trivial question at first glance. It is not trivial since everyday life is largely invisible to us (because of its familiarity and because of its contradictions, which people may not want to face). People do not realize the patterns in their actions as they perform them. The anthropologist Clyde Kluckhohn illustrated this point with an aphorism: "The fish would be the last creature to discover water." Fieldwork research on teaching, through its inherent reflectiveness helps researchers and teachers to *make the familiar strange* and interesting again (see Erickson, 1984). The commonplace becomes problematic. What is happening can become visible, and it can be documented systematically.

A second reason these questions are not trivial is the *need for specific understanding through documentation of concrete details of practice*. Answering the question, "What is happening?" with a general answer often is not very useful. "The teacher (or students) in this classroom are on-task" often doesn't tell one the specific details that are needed in order to understand what is being done, especially if one is attempting to understand the points of view of the actors involved. Nor is an answer like the following sufficient, usually: "The teacher is using behavior modification techniques effectively." This does not tell how, specifically, the teacher used which techniques with which children, or what the researcher's criterion of effectiveness was. Similarly, the statement "The school district implemented a program to increase student time on task" does not tell enough about the extent and kind of implementation so that if test scores or other outcome measures did or did not show change, that putative "outcome" could reasonably be attributed to the putative "treatment." "What *was* the treatment?" is often a useful question in research on teaching. Interpretive fieldwork research can answer such a question adequately and specifically.

A third reason these questions are not trivial concerns the need to consider the *local meanings* that happenings have for the people involved in them. Surface similarities in behavior are sometimes misleading in educational research. In different classrooms, schools, and communities, events that seem ostensibly the same may have distinctly differing local meanings. Direct questioning of students by a teacher, for example, may be seen as rude and punitive in one setting yet perfectly appropriate in another. Within a given setting, a certain behavior like direct questioning may be appropriate for some children at one moment and inappropriate at the next, from a given teacher's point of view at a given time in the event being observed. When a research issue involves considering the distinctive local meanings that actors have for actors in the scene at the moment, fieldwork is an appropriate method.

A fourth reason these main research questions of fieldwork are not trivial concerns the *need for comparative understanding of different social settings*. Considering how a setting and its wider social environments are related helps to clarify what is happening in the local setting itself. The observation "Teachers don't ask for extra materials; they just keep using the same old texts and workbooks for each subject" may be factually accurate, but this could be interpreted quite differently depending on contextual circumstances. If school system-wide regulations made ordering supplementary materials very difficult in a particular school district, then the teachers' actions could not simply be attributed to the spontaneous generation of local meanings by participants in the local scene--the "teacher culture" at that particular school. What the teachers do at the classroom and building level is influenced by what happens in wider spheres of social organization and cultural patterning. These wider spheres of influence must also be taken into account when investigating the narrower circumstances of the local scene. The same applies to relationships of influence across settings at the same system level, such as the classroom and the home. Behavior that may be considered inappropriate in school may be seen as quite appropriate and reasonable in community and family life. For example, children may be encouraged in the family to be generous in helping one another; in the classroom this may be seen by the teacher as attempts at cheating.

A fifth reason for the importance of this set of questions concerns the *need for comparative understanding beyond the immediate circumstances of the local setting*. There is a temptation on the part of researchers and school practitioners alike to think of what is happening in the standard operating procedures of everyday life as the way things must and ought to be, always and everywhere. Contrasting life in United States classrooms to school life in other societies, and to life in other institutional contexts such as hospitals and factories, broadens one's sense of the range of possibilities for organizing teaching and learning effectively in human groups. Knowing about other ways of organizing formal and nonformal education by looking back into human history, and by looking across to other contemporary societies around the world, can shed new light on the local happenings in a particular school.

The fieldworker asks continually while in the field setting, "How does what is happening here compare with what happens in other places?" Awareness of this does not necessarily lead to immediate practical solutions in planning change. The comparative perspective does inform attempts at planning change, however. By taking a comparative perspective, people can distinguish the spuriously distinctive and the genuinely distinctive features of their own circumstances. That can lead them to be at once more realistic and more imaginative than they would otherwise have been in thinking about change.

To conclude, the central questions of interpretive research concern issues that are neither obvious nor trivial. They concern issues of human choice and meaning, and in that sense they concern issues of improvement in educational practice. Even though the stance of the fieldworker is not manifestly evaluative, and even though the research questions do not take the form "Which teaching practices are most effective?" issues of effectiveness are crucial in interpretive research. The definitions of effectiveness that derive from the theoretical stance and empirical findings of interpretive research differ from those found in the more usual approaches to educational research and development. The program of interpretive research is to subject to critical scrutiny every assumption about meaning in any setting, including assumptions about desirable aims and definitions of effectiveness in teaching. This critical stance toward human meaning derives from theoretical presuppositions that will be reviewed next in considerable detail.

Intellectual Roots and Assumptions of Interpretive Research on Teaching

Roots in Western European Intellectual History

Interpretive research and its guiding theory emerged in the late 18th century and developed out of interest in the lives and perspectives of people in society who had little or no voice. Medieval social theorists had stressed the dignity of manual labor, but with the collapse of the medieval world view in the 16th and 17th centuries, the lower classes had come to be portrayed in terms that were at best paternalistic.

One sees this paternalism in Baroque theater and opera. Peasants and house servants were depicted in a one-dimensional way as uncouth and brutish. They were not reflective, although they may have been capable of a kind of venal cleverness in manipulating their overseers, masters, and mistresses. Examples of this are found in the servant characters of Molière and in the farm characters of J.S. Bach's *Peasant Cantata*, written in 1742. Beaumarchais' *The Barber of Seville*, written in 1781, is distinctive precisely because it presented one of the first sympathetic characterizations of a servant figure. The dangerous implications of such a portrayal were immediately recognized by the French censors, who prevented its performance for three years after it was written. The perspective represented by *The Barber of Seville* had been preceded in France by the writing of Rousseau. In England, this new perspective had been prefigured by the mid-18th century English novelists.

Interest by intellectuals in the life-world (*Lebenswelt*) of the poor--especially the rural poor--continued to grow in the early 19th century as exemplified by the brothers Grimm, who elicited folklore from German peasants. Their work emerged simultaneously with the development of the early romantic movement in literature, in which commoners were positively portrayed. Folklore research presupposed that the illiterate country people who were being interviewed possessed a genuine aesthetic sense and a true folk wisdom, in spite of the peasants' lack of formal education and lack of "cultivated" appreciation of the polite art forms practiced among the upper classes. Concerns for social reform often accompanied this interest in the intelligence and talent of the untutored rural poor. Innovations in pedagogy were also related to this shift in the view of the poor, for example, the schools established in Switzerland by Pestalozzi to teach children who had hitherto been considered unteachable.

Later in the 19th century, attention of reformers shifted from the rural poor to the working-class populations of the growing industrial towns (for a parallel discussion of this development, see Bogdan & Biklen, 1982, pp. 4-11). In England, Charles Booth documented the everyday lives of children and adults at work in factories and at home in slum neighborhoods (see Webb, 1926). Similar attention was paid to the urban poor in the United States by the muckraking journalists Jacob Riis (in *How the Other Half Lives*, 1890) and Lincoln Steffins (1904) and Upton Sinclair (in for example, *The Jungle*, 1906).

Another line of interest developed in the late 19th century in kinds of unlettered people who lacked power and about whom little was known. These were the nonliterate peoples of the European-controlled colonial territories of Africa and Asia, which were burgeoning by the end of the 19th century. Travelers' accounts of such people had been written since the beginnings of European exploration in the 16th century. By the late 19th century such accounts were becoming more detailed and complete. They were receiving scientific attention from the emerging field of anthropology. Anthropologists termed these accounts *ethnography*--monograph-length descriptions of the lifeways of people who were *ethnoi*--the ancient Greek term for "others"--barbarians who were not Greek. Anthropologists had begun to send out their students to collect ethnographic information themselves, rather than relying on the information in the books written by colonial administrators, soldiers, and other travelers.

In 1914, one of these students, Bronislaw Malinowski, was interned in the Trobriand Archipelago by the British government while he was on an ethnographic expedition. Malinowski was a student at Oxford University and had been sent to the British colonies by his teachers. He was also Polish, a subject of the Austro-Hungarian Empire. On that ground he was suspect as a spy by some officials of the British colonial administation. Forced to stay in the Trobriands more than twice as long as he had intended, during his detention Malinowski developed a closer, more intimate view of the everyday lifeways and meaning-perspectives of a primitive society than had any previous ethnographer, whether traveler or social scientist.

Malinowski's account, when published in 1922, revolutionized the field of social anthropology by the specificity of its descriptive reporting and by the sensitivity of the insights presented about the beliefs and perspectives of the Trobrianders. Malinowski (1935, 1922/1966) reported insights not only about explicit cultural knowledge. Information on explicit culture had been elicited from informants by earlier researchers who used interviewing strategies derived from the work of the early folklorists. In addition Malinowski reported his inferences about the Trobriander's implicit cultural knowledge--beliefs and perspectives that were so customary for the Trobrianders that they were held outside conscious awareness and thus could not be readily articulated by informants. By combining long-term participant observation with sensitive interviewing, Malinowski claimed, he was able to identify aspects of the Trobrianders' world view that they themselves were unable to articulate.

Many anthropologists attacked the claims of Malinowskian enthnography as too subjective and unscientific. Others were very taken by it. It squared with the insights of Freudian psychology that people knew much more than they were able to say. Freud's perspective in turn, was consonant with the much broader intellectual and artistic movement of expressionism, which emphasized the enigmatic and inarticulate dark side of human experience, harking back to a similar emphasis among the early Romantics. Malinowski was a product of this late-19th-century intellectual milieu, and the postwar disillusionment with the values of rational liberal thinking made the 1920s an especially apt time for the reception of Malinowski's position.

Malinowski's intellectual milieu in his formative years was not only that of the late 19th century in general, but that of German intellectual perspectives in particular. These bear mention here, for they involve presuppositions about the nature of human society and consequently about the nature of the social sciences. German social theory, as taught in universities of the time, made a sharp distinction between natural science, *Naturwissenschaft*, and what can be translated "human science," or "moral science," *Geisteswissenschaft*. The latter term, which literally means "science of spirit," was distinguished from natural science on the grounds that humans differ from other animals and from inanimate entities in their capacity to make and share meaning. Sense making and meaning were the spiritual or moral aspect of human existence that differed from the material existence of the rest of the natural order. Because of this added dimension, it was argued, humans living together must be studied in terms of the sense they make of one another in their social arrangements.

The etymological metaphor of spirit as an entity that underlies this sharp distinction between the natural and the human sciences recalls an analogous metaphor in the term *psychology*, which in the Greek literally means "systematic knowledge about the soul." The terms *Geisteswissenschaft* and *psychology* remind one that in the mid 19th century, as social and behavioral sciences began to be defined as distinctive fields, there was as yet no commitment to define them as positive sciences modeled after the physical sciences. That came later.

The chief proponent of the distinction between the natural and the human sciences was the German historian and social philosopher Wilhelm Dilthey (1883/1976c, 1914/1976a). He argued (1914/1976b) that the methods of the human sciences should be *hermeneutical* or interpretive (from the Greek term for interpreter), with the aim of discovering and communicating the meaning-perspectives of the people studied, as an interpreter does when translating the discourse of a speaker or writer. Dilthey's position was adopted by many later German social scientists and philosophers, notably Weber (1922/1978) and Husserl (1936/1970). A somewhat similar position was taken by Dilthey's contemporary, Marx, especially in his early writings, for example, the *Theses on Feuerbach* (1959). Despite Marx's emphasis on material conditions as determining norms, beliefs, and values, he was centrally concerned with the content of the meaning-perspectives so determined. Indeed, a fundamental point of Marx is the historical embeddedness of consciousness--the assumption that one's view of self and of the world is profoundly shaped in and through the concrete circumstances of daily living in one's specific life situation. Subsequent Marxist social theorists have presumed that profound differences in meaning-perspective will vary with social-class position and that presumption extends to any other special life situation, for example, that due to one's gender status, race, and the like.

One can assume that Malinowski was influenced by basic assumptions in German social theory of his day. Those assumptions were contrary to those of French thinkers about society, notably Comte and Durkheim. Comte, in the mid-19th century, proposed a positivist science of society, modeled after the physical sciences, in which causal relations were assumed to be analogous to those of mechanics in Newtonian physics (Comte, 1875/1968). Durkheim, Comte's pupil, may or may not have adopted the metaphor of society as a machine, but in attempting to contradict the notion that the individual is the fundamental unit of society, he argued that society must be treated as an entity in itself--a reality *sui generis*. Such a position can easily be interpreted as a view of society as an organism or machine. At any rate, what was central for Durkheim was not the meaning-perspectives of actors in society, but the "social facts" of their behaviors (Durkheim 1895/1958). This stands in sharp contrast to the German intellectual tradition of social theory. (On the relations of presuppositions in social theory to methodology in the social sciences, see the book-length comparative review of functionalist, interpretive, Marxist, and existentialist positions in Burrell & Morgan, 1979; see also Winch, 1958, and Giddens, 1982.)

A final influence on American participant observational research was the development of American descriptive linguistics during the 1920s. In studying native American languages linguists were discovering aspects of language structure--sound patterns and grammar--that had never been considered in traditional grammar and philology based on Indo-European languages. These new aspects of language structure were regular and predictable in speech, but the speakers themselves were unaware of the structures they had learned to produce so regularly. Here was another domain in which was evident the existence of implicit principles of order that influenced human behavior outside the consciousness of those influenced.

This intellectual environment was the context for the training of Margaret Mead at Columbia University, with which she was associated for the rest of her career. Her study *Coming of Age in Samoa* (1928), again controversial as of this writing, can be considered the first monograph length educational ethnography. It is significant that it dealt with teaching and learning outside schools.

By the mid-1920s with the urban sociology of Robert Park at the University of Chicago, ethnography came home. Students of Park and Burgess (e.g., Wirth, 1928; Zorbaugh, 1929) used sustained participant observation and informal interviewing as a means of studying the everyday lives and values of *natural groups* of urban residents (mostly working class migrants from Europe), who in Chicago and other major American cities were distributed in residential territories defined by an intersection of geography, ethnicity, and social class. In the 1930s a whole American community, Newburyport, Massachusetts ("Yankee City"), was studied using Malinowskian fieldwork methods, under the direction of the anthropologist W. Lloyd Warner at Harvard (Warner & Lunt, 1941). In a study that was greatly influenced by Warner, Whyte (1955) identified another kind of natural group as a unit of analysis, a group of late adolescent males in an urban working-class Italian neighborhood. Here the community was studied out from the gang of young men, rather than in the usual anthropologist's way of trying to study the community as a whole, which Whyte found to be theoretically and logistically impossible in an urban setting.

After World War II, ethnographers began to turn directly to issues of education, under the leadership of Spindler (1955) at Stanford and Kimball (1974) at Teacher's College, Columbia. Both were influenced considerably by the work of Margaret Mead, and Kimball had been a student of Warner's. Chicago school sociology also made a significant contribution to ethnographic work in a study of a cohort of medical students under the direction of Everett Hughes (cf. Becker, Geer, Hughes, & Strauss, 1961). An institutionalized network for researchers with these interests was initiated in 1968, with the formation of The Council on Anthropology and Education as a member organization of the American Anthropological Association. Also during the 1960s much qualitative work on teaching was done in England, under the leadership of Stenhouse and his associates (Elliott & Adelman, 1976; MacDonald & Walker, 1974; Stenhouse, 1978; Walker & Adelman, 1975). The next major impetus for ethnographic study of education, and the last to be noted in this discussion, came in the early 1970s with the creation of the National Institute of Education. Key staff there established policies that not only allowed funding for ethnographic study, but which in some instances encouraged work to be done in schools along those lines. Often in that work the unit of analysis was the school community, with classroom teaching receiving peripheral attention. At the same time, however, studies were begun in which teaching in school classrooms was the central phenomenon of research interest. (For additional discussion of the role of the National Institute of Education, see Cazden, in Wittrock, in press).

To conclude where I began, it is important to remember that qualitative research that centers its attention on classroom teaching is a very recent phenomenon in educational research. The key questions in such research are these: "What is happening here, specifically? What do these happenings mean to the people engaged in them?"

The specifics of action and of meaning-perspectives of actors in interpretive research are often those that are overlooked in other approaches to research. There are three major reasons for this. One is that the people who hold and share the meaning-perspectives that are of interest are those who are themselves overlooked, as relatively powerless members of society. This is the case for teachers and students in American public schools, as it was for the working class in post medieval Europe. (See the discussion on the powerlessness of teachers in Lanier (1984). A second reason that these meaning-perspectives are not represented is that they are often held outside conscious awareness by those who hold them and thus are not explicitly articulated. A third reason is that it is precisely the meaning-perspectives of actors in social life that are viewed theoretically in more usual approaches to educational research as either peripheral to the center of research interest or as essentially irrelevant--part of the "subjectivity" that must be eliminated if systematic, "objective" inquiry is to be done.

In the section that follows I will explore further the significance to research on teaching of the meaning-perspectives of teachers and students and will consider reasons why standard educational research does not, for the most part, take account of these phenomena in the design and conduct of studies of teaching and learning in classrooms.

Theoretical Assumptions of Interpretive Research on Teaching

Let us begin by considering some well-documented findings from survey research--test data on school achievement and measured intelligence. These are perplexing findings. They can be interpreted differently depending upon one's theoretical orientation.

1. In the United States there are large differences across individuals in school achievement and measured intelligence, according to the class, race, gender, and language background of the individuals. Moreover, these differences persist across generations.
2. Test score data accumulated in the recent process-product research on teaching show differences across different classrooms in the achievement of elementary pupils who are similarly at risk for school failure because of their class, race, gender, or language background.
3. The same test data also show differences in achievement and measured intelligence among individual children in each classroom.

These findings from survey data suggest that while the likelihood of low school achievement by low socioeconomic status children and others at risk may be powerfully influenced by large-scale social processes (i.e., handicaps due to one's position in society) and individual differences (i.e., measured intelligence) the school achievement of such children is amenable to considerable influence by individual teachers at the classroom level. Teachers, then, can and do make a difference for educational equity. Finding Number 2 seems to argue against the contention of critics on the radical left that social revolution is a necessary precondition for improvement of school performance by the children of the poor in America. Finding Number 2 also contradicts the contention of liberals that environmental deprivation, especially the home child-rearing environment, accounts for the low school achievement of such pupils, since outside-school conditions presumably did not change for those pupils at risk who nonetheless did better academically with some teachers than with others. Findings Number 1 and 3 contradict the contention of moderate and radical conservatives that current school practices involve social sorting that is fair (i.e., assigning pupils to different curricular tracks on the basis of measured achievement) and that the route to educational improvement lies in simply applying current sorting practices more rigidly.

The radical left, of course, can dismiss finding Number 2 on the grounds that the differences in measured achievement of pupils that can be attributed to teacher influence are only slight, and are thus trivial. The radical right can dismiss findings Number 1 and 3 on the grounds that children of low-socio-economic status (SES); or racial/linguistic/cultural minority background; or female children are genetically inferior to white upper-middle-class males and that this accounts for their low achievement and measured intelligence. Both of these counterarguments, from the left and from the right, have been used to dismiss the significance of these three findings. If one does not dismiss the findings on those grounds, however, the three findings taken together are paradoxical. It would seem that children's achievement can vary from year to year and from teacher to teacher with no other things changing in those children's lives. Yet children at risk, overall, perform significantly less well in American schools than do children not at risk. Positive teacher influence on the achievement of children at risk seems to be the exception rather than the rule, and *risk* here refers to the children's social background, not to the individual child's intrinsic ability. (Indeed, from a interpretive perspective it is meaningless to speak of a child's intrinsic ability, since the child is always found in a social environment, and since the child's performance and adults' assessments of the child's performance both influence one another continually. Rather, one can say that a child's assessed ability is socially constructed. It is a product of the child's social situation--the social system--rather than an attribute of that person.)

The findings from the United States are more paradoxical in the light of international school science achievement data (see Comber & Keeves, 1973, pp. 251, 259) which show that in some developed countries, such as Flemish-speaking Belgium, Italy, Sweden, and Finland, the correlation between social class background and school achievement is much lower than it is in the United States or Great Britain, and that the correlation is lower in Japan than in the United States or Britain although not so low in Japan as in the countries listed first. How is one to understand why these survey data show the patterns they do? Is the social construction of student performance and assessed ability different in Italy from that of the United States? What might one do to foster higher achievement by low-achieving groups of pupils in the United States? How is one to understand the nature of teaching in the light of these findings? The survey data themselves do not say. They must be interpreted in the context of theoretical presuppositions about the nature of schools, teaching, children, and classroom life, and about the nature of cause in human social life in general. These assumptions, as already noted, differ fundamentally between the standard approaches to research on teaching and the interpretive approaches that are the topic of this paper.

Perhaps the most basic difference between the interpretive and the standard approaches to research on teaching lies in their assumptions about the nature of cause in human social relations. This recalls the distinction made earlier between the natural sciences and the human sciences (*Naturwissenschaft* and *Geisteswissenschaft*).

In the natural sciences, causation can be thought of in mechanical, chemical, or biological terms. Mechanical cause, as in Newtonian physics, involves relationships between force and matter and physical linkages through which force is exerted--one billiard ball striking another or the piston in a combustion engine linked by cams to the drive shaft. Chemical cause involves energy transfer in combinations between atoms of different elements. Biological cause is both mechanical and chemical. Relations among organisms are also ecological, that is, causal relations are not linear in one direction, but because of the complexity of interaction among organisms within and across species, cause is multidirectional. Thus the notion of cause and effect in biology is much more complex than that of physics or chemistry. But the difference in conceptions of cause in the natural sciences are essentially those of degree rather than of kind. Even in biology there is an underlying assumption of uniformity in nature. Given conditions x, a bacterium or a chicken is likely to behave in much the same way on two different occasions. The same is true in physics or chemistry, more or less, despite post-Einsteinian thinking. Under conditions x, one calorie of heat can be considered the same entity on the surface of the sun and on the surface of the earth, and under conditions x, one atom of oxygen and two of hydrogen will combine in the same way today as they do the next day.

The assumption of uniformity of nature, and of mechanical, chemical, and biological metaphors for causal relations among individual entities is taken over from the natural sciences in positivist social and behavioral sciences. Animals and atoms can be said to *behave*, and to do so fairly consistently in similar circumstances. Humans can be said to behave as well and can be ob-observed to be doing so quite consistently under similar circumstances. Moreover, one person's behavior toward another can be said to cause change in the state of another person. Mechanical, chemical, and ecological metaphors can be used to understand these causal relations, thinking of humans in society as a machine, an organism, or an ecosystem of inanimate and animate entities.

Classrooms and teaching have been studied from this perspective, especially by educational psychologists, and also by some positivist sociologists. Linear causal models are often employed, behavior is observed, and causal relations among various behavioral variables are inferred; for example, certain patterns of questioning or of motivational statements by the teacher are studied to see if they cause certain changes in test-taking behavior by children.

In educational psychology this perspective derives from a kind of hybrid behaviorism, in the sense that what counts is the researcher's judgment of what an observable behavior means, rather than the actors' definitions of meaning. Such behaviorist, or "behavioralist" presuppositions about the fixed and obvious meanings of certain types of actions by teachers underlie the so-called process-product approach to research on teacher effectiveness (cf. Dunkin & Biddle, 1974), which was at first correlational and later became experimental.

In educational sociology an analogous perspective derived from the shift toward positivism that occurred in American sociology after World War II. Social facts were seen as causing other social facts, by relations akin to that of mechanical linkage. These linkages were monitored by large-scale correlational survey research (e.g., Coleman et al., 1966) and subsequent reanalyses of that data set (Jencks et al., 1979 and Mosteller & Moynihan, 1972).

The main guiding metaphors for most educational research on teacher and school effectiveness from the 1950s through the 1970s became the metaphor of the classroom as something like a Skinner box and the metaphor of school systems and the wider society as something like linked parts of a large, internally differentiated machine. In neither metaphor is the notion of mind necessary. The phenomenological perspective of the persons behaving is not a feature of the theoretical models the metaphors represent.

Interpretive researchers take a very different view of the nature of uniformity and of cause in social life. The behavioral uniformity from day to day that can be observed for an individual, and among individuals in groups, is seen not as evidence of underlying, essential uniformity among entities, but as an illusion--a social construction akin to the illusion of assessed ability as an attribute of the person assessed. Humans, the interpretive perspective asserts, create meaningful interpretations of the physical and behavioral objects that surround them. All people take action toward the objects that surround them in the light of their interpretations of meaningfulness. Those interpretations, once made, are taken as real--actual qualities of the objects perceived. Thus once a child is assessed as having low ability, we assume not only that the entity *low ability* actually exists, but that it is actually an attribute of that child. We do not question such assumptions, once made. We cannot do so, or as actors in the world we would always be inundated by masses of uninterpretable detail and would be continually tantalized by the need to hold all inference and background assumption in abeyance. We handle the problem of having to be, for practical purposes, *naive realists*--believers in the taken for granted reality we perceive at first glance--by continually taking the leap of faith that is necessary. We see the ordinary world as if it were real, according to the meanings we impute to it.

The previous discussion elaborates on the point made in the previous section on the emergence of a distinction between the natural sciences, *Naturwissenschaften*, and the human sciences, *Geisteswissenschaften*. This line of thinking, explicated by Dilthey, and continued with Weber (1922/1978) and Schutz (1971), is exemplified in current writing in the philosophy of social science by Berger and Luckmann (1967), Winch (1958), and Giddens (1976), among many others.

To be sure, there is much apparent uniformity in human social life. Through *culture* humans share learned systems for defining meaning, and in given situations of practical action humans often seem to have created similar meaning interpretations. But these surface similarities mask an underlying diversity; in a given action situation one cannot assume that the behaviors of two individuals, physical acts with similar form, have the same meaning to the two individuals. The possibility is always present that different individuals may have differing interpretations of the meaning of what, in physical form, appear to be the same or similar objects or behaviors. Thus a crucial analytic distinction in interpretive research is that between *behavior*, the physical act, and *action*, which is the physical behavior plus the meaning-interpretations held by the actor and those with whom the actor is engaged in interaction.

The object of interpretive social research is action, not behavior. This is because of the assumption made about the nature of cause in social life. If people take action on the grounds of their interpretations of the actions of others, then meaning-interpretations themselves are causal for humans. This is not true in nature, and so in natural science, meaning, from the point of view of the actor, is not something the scientist must discover. The billiard ball does not make sense of its environment. But the human actor in society does, and different humans make sense differently. They impute symbolic meaning to others' actions and take their own actions in accord with the meaning interpretations they have made. Thus the nature of cause in human society becomes very different from the nature of cause in the physical and biological world, and so does the nature of uniformity in repeated social actions. Because such actions are grounded in choices of meaning interpretation they are always open to the possibility of reinterpretation and change.

This can be seen in examples of symbolic action such as public executions. Such an event is conducted with the aim not only to punish a particular offender but to coerce a confession of guilt or remorse in order to deter others from committing similar offenses. The intentions are both physical and social: to kill the offender and to do so in such a way as to influence public opinion. The physical death that occurs can be seen to result from a physical cause that disrupts the biochemical organization of the body as a living system. The reactions of the offender and audience, however, are not "caused" by the physical intervention itself, but are matters of meaning-interpretation, which is done from the various points of view of differing actors in the event.

Consider the case of Joan of Arc. Some soldier's hand and arm thrust a lighted torch into the pile of wood whose subsequent combustion killed Joan, who was tied to a stake. Looking at the crude physical and behavioral "facts" in this sequence of events, one can say that the result of what the soldier did was a matter of physics, chemistry, and biology. But the soldier's behavior did not cause Joan to cry out, denying the charge of witchcraft, insisting that the voices she had heard were those of angels rather than of demons. She persisted in justifying her military resistance to the English as a response to the will of God. Such persistence was social action, entailing a choice of meaning interpretation. Some of the witnesses at the scene accepted Joan's interpretation rather than that of her English judges. As the story of her death spread, French nobels and commoners united in intensified resistance to the English. French morale was increased rather than decreased, which frustrated the intent of the execution on grounds of witchcraft.

Meaning-interpretations, rather than physical or chemical processes, were causal in this sequence of social actions and reactions. These interpretations were the result of human choices, made at successive links in the chain of social interaction. Had the soldier refused to light the fire because he was persuaded of Joan's innocence, the judges might have chosen to relent or to execute the soldier as well. Had Joan admitted guilt to the charge of witchcraft, the reaction of the French armies might have been different. But even if she had confessed publicly, the witnesses and subsequent audience might have discounted her admission as the result of coercion. Thus the French might still have continued to resist the English, enraged by what they had come to see as a symbol of abhorrent injustice.

One can see how it makes sense to claim that prediction and control, in the tradition of natural science, is not possible in systems of relations in which cause is mediated by systems of symbols. The martyr breaches the symbolic order of a degradation ceremony, turning the tables upon those whose intention is to degrade. Martyrs are exceptional, but they are not unique. That martyrdom occurs at all points to the intrinsic fragility of the usual regularities of social life, grounded as they are in choices of meaning in the interpretation of symbols.

The case of the execution of Joan of Arc shows how interpretive sense making can be seen as fundamentally constitutive in human social life. Because of that assumption, interpretive research maintains that causal explanation in the domain of human social life cannot rest simply upon observed similarities between prior and subsequent behaviors, even if the correlations among those behaviors appear to be very strong, and experimental conditions obtain. Rather, an explanation of cause in human action must include identification of the meaning-interpretation of the actor. "Objective" analysis (i.e., systematic analysis) of "subjective" meaning is thus of the essence in social research, including research on teaching, in the view of interpretive researchers.

The interpretive point of view leads to research questions of a fundamentally different sort from those posed by standard research on teaching. Rather than ask which behaviors by teachers are positively correlated with student gains on tests of achievement, the interpretive researcher asks "What are the conditions of meaning that students and teachers create together as some students appear to learn and others don't? Are there differences in the meaning perspectives of teachers and students in classrooms characterized by higher achievement and more positive morale? How is it that it can make sense to students to learn in one situation and not in another? How are these meaning systems created and sustained in daily interaction?"

These are questions of basic significance in the study of pedagogy. They put *mind* back in the picture, in the central place it now occupies in cognitive psychology. The mental life of teachers and learners has again become crucially significant for the study of teaching (Shulman, 1981, see Shulman's chapter in, Wittrock, in press), and from an interpretive point of view, mind is present not merely as a set of "mediating variables" between the major independent and dependent variables of teaching--the inputs and outputs. Sense making is the heart of the matter the medium of teaching and learning that is also the message.

Interpretive, participant observational fieldwork research, in addition to having a central concern with mind and with subjective meaning, is concerned with the relation between meaning-perspectives of actors and the ecological circumstances of action in which they find themselves. This is to say that the notion of the *social* is central in fieldwork research. In a classic statement, Weber (1922/1978) defined social action:

> A social relationship may be said to exist when several people reciprocally adjust their behavior to each other with respect to the meaning which they give to it, and when this reciprocal adjustment determines the form which it takes. (p. 30)

Standing somewhere, for example, is a behavior. Standing in line, however, is social action, according to Weber's definition, because it is meaningfully oriented to the actions of others in the scene--others standing in the line, and, in the case of a typical school classroom, the teacher in charge, who has told the children to stand in line. All these others in the scene are part of ego's social ecology. Patterns in that ecology are defined by implicit and explicit cultural understandings about relationships of proper rights and obligations as well as by conflicts of interests across individuals and groups in access to certain rights. Thus, for example, in the standing-in-line scene, the official rights of the person occupying the status of teacher differ from the rights of those persons occupying the status of student. Moreover, there is an additional dimension of difference in rights and obligations, that between the official (formal) set of rights and obligations and the unofficial one. Officially, all children in the line have the obligation to obey the teacher's command to stand in line. Unofficially, however, some children may have rights to obey more casually than others. These differences among the children can be thought of as an unofficial, informal social system within which status (one's social position in relation to others) and role (the set of rights and obligations that accrues to a particular status) are defined differently from the ways they are defined in the official, formal system.

A basic assumption in interpretive theory of social organization is that the formal and informal social systems operate simultaneously, that is, persons in everyday life take action together in terms of both official and unofficial definitions of status and role. A basic criticism of standard research on teaching that follows from this theoretical assumption is that, to the extent that teacher and student roles are accounted for in the predetermined coding categories by which classroom observation is done, the category systems take no account of the unofficial, informal dimension of role and status in the classroom. This is not only to miss the irony and humor of the paradoxical mixing of the two dimensions of classroom life, but to miss the essence of the social and cognitive organization of a classroom as a learning environment. Classrooms, like all settings in formal organizations, are places in which the formal and informal systems continually intertwine. Teaching, as instructional leadership, consists in managing the warp and woof of both dimensions in dealing with children and their engagement with subject matter. To attempt to analyze classroom interaction by observing only the warp threads and ignoring the woof threads is to misrepresent fundamentally the process of pedagogy.

The focus on social ecology--its process and structure--is intrinsic in interpretive social research on teaching. The researcher seeks to understand the ways in which teachers and students, in their actions together, constitute environments for one another. The fieldwork researcher pays close attention to this when observing in a classroom, and his/her fieldnotes are filled with observations that document the social and cultural organization of the observed events, on the assumption that the organization of *meaning-in-action* is at once the learning environment and the content to be learned.

All human groups have some form of social organization. While it is universal that regularly interacting sets of individuals possess the capacity to construct cultural norms by which their social ecology is organized--face to face and in wider spheres up and out to the level of the society as a whole--the particular forms that this social organization takes are specific to the set of individuals involved. Thus one can say that social organization has both a local and a nonlocal character. Let us consider the local nature of social organization first and then the nonlocal nature of it.

Interpretive social research presumes that the meanings-in-action that are shared by members of a set of individuals who interact recurrently through time are *local* in at least two senses. First, they are local in that they are distinctive to that particular set of individuals, who as they interact across time come to share certain specific local understandings and traditions--a distinctive microculture. Such microcultures are characteristic of all human groups whose members recurrently associate. These are so-called *natural groups*, which are the typical unit of analysis studied by fieldwork researchers. The ubiquity of these natural, group-specific microcultures can be illustrated by the following example. Compare and contrast the daily routines of two upper-middle-class white American families, one of which is characterized by serious emotional pathology, and the other of which is not. As the family systems are viewed from the outside, on the surface, patterns in the conduct of everyday life may seem very similar. Both families live in the same suburb, next door to one another. Both houses have dining rooms. Both families use paper towels in the kitchen and buy Izod sports shirts for their children. Yet in one family there is deep trouble, and in the other there is not.

The microculture of one nuclear family regarding child-rearing and other aspects of family life differs in at least some respects from that of a family living next door that is identical to the first in ethnicity, class position, age of parents and children, and other general demographic features. These differences, although small, are not at all trivial. They can have profound significance for the successful conduct of daily life. This is attested to by the personal experience of marriage, in which ego learns that ego's in-laws and spouse hold somewhat different assumptions from those held by ego about the normal conduct of daily life, and that, these others may be just as deeply convinced as is ego of the inherent rightness of their own customary ways of doing things.

The same is true for school classrooms. Interpretive researchers presume that microcultures will differ from one classroom to the next, no matter what degree of similarity in general demographic features obtains between the two rooms, which may be located literally next door or across the hall from one another. Just as the adjacent suburban families differed, so two classrooms can differ in the meaning-perspectives held by the teacher and students, despite the surface similarities between the two rooms. Almost every American elementary-school classroom today has fluorescent lights. Regulations governing the amount of floor space that must be provided for a given number of children mandate that American classrooms will be roughly the same size. Regulations mandate a roughly similar ratio of adults to students. Entering virtually any elementary school classroom, one will see arithmetic workbooks, a published basal reading series, a chalkboard, dittoed work sheets, some books to read, crayons for coloring, paste, and scissors. Roughly the same level of skills are taught at the various grade levels throughout the country. How then does one account for the substantial differences in patterns of student achievement across different classrooms? It may be that the differences in organization that researchers need to be interested in are quite small indeed, and radically local--little differences in everyday classroom life that make a big difference for student learning, subtly different meaning perspectives in which it makes sense to students to learn in one classroom, and does not make sense to learn in another classroom.

Meanings-in-action are assumed by some interpretive researchers to be local in a second and more radical sense, that of the locality of moment-to-moment enactment of social action in real time. Today's enactment of breakfast in a family differs from yesterday's, and in conversation during today's breakfast, the content and process of one person's turn at speaking and the reaction of the audience to what is said will differ from that of the next turn at speaking and audience reaction. Life is continually being lived anew, even in the most recurrent of customary events. This is assumed to be true of school classrooms as well.

Positivist research on teaching presumes that history repeats itself, that what can be learned from past events can generalize to future events--in the same setting and in different settings. Interpretive researchers are more cautious in their assumptions. They see, as do experienced teachers, that yesterday's reading group was not quite the same as today's, and that this moment in the reading group is not the same as the next moment. What constitutes appropriate and intelligible social action in classrooms and all other natural human groups is the capacity for a set of individuals to live together successfully in the midst of the current moment, reacting to the moment just past and expecting the next moment to come. This is the world of lived experience, the life-world (*Lebenswelt*). The life-world of teacher and students in a classroom is that of the present moment. They traverse the present moment together across time as surfboarders who ride the crest of a wave together with linked arms. It is a delicate interactional balancing act. If any one in the set wavers or stumbles, all in the set are affected.

Each individual in the set has a particular point of view from within the action as the action changes from moment to moment. During the course of the enactment of recurrent types of events (e.g., breakfast, math lessons) some of these individual perspectives come to be intersubjectively shared among the members of the interacting set. Members come to approximate one another's perspectives, in at least a rough correspondence among the individually differing points of view, even though these are not identical. Since each individual in the set is unique, however, the specific content of shared understandings at any given moment, and across moments and days, is unique to that particular set of individuals. Thus within a given moment in the enactment of an event and during the overall course of shared life together, particular sets of individuals come to hold distinctive local meanings-in-action.

These meanings are also nonlocal in origin. Face-to-face social relations do indeed have a life of their own, but the materials for the construction of that life are not all created at the moment, within the scene. One nonlocal influence on local action is culture, which can be defined in cognitive terms as learned and shared standards for perceiving, believing, acting, and evaluating the actions of others (see the discussion in Goodenough, 1981, p. 62ff.). Cultural learning profoundly shapes what we notice as well as what we believe, at levels outside conscious awareness as well as within awareness. Students in an ordinary American classroom speak English, a culturally learned language system that connects the students with the lives of others across space and time, back before the Norman Conquest. Much of what they know of the language is outside conscious awareness--that is, children come to school knowing how to use grammatical constructions of which they develop a reflective awareness only after some years of schooling. Students in American classrooms learn a particular cultural tradition of mathematical reasoning and an arithmetic symbol system derived from one developed in Arabia. These cultural traditions are nonlocal in provenience.

Another source of nonlocal influence is the perception that local members have of interests or constraints in the world beyond the horizon of their face-to-face relations. In a school classroom these influences may come from the teacher next door, from parents, from the principal, or from institutionalized procedures in the federal government regarding the allocation of special resources to the classroom. There is indeed a social structure within which classroom life is embedded. In that sense Durkheim was right--society is a reality in itself, and there are social facts of which local actors take account.

Here, however, the interpretive researcher parts company with Durkheim, for the issue is how to take account of the reality of nonlocal culture and society without assuming mechanistic causal linkages between these outside realities and the realities of social relations face to face. Interpretive research takes a somewhat nominalist position on this issue of ontology: Society and culture do exist, but not in a reified state. Social class position, for example, does not "cause" school achievement--*people* influence that, in specific interactional occasions. The structure of the English language system does not "cause" the way specific people speak; the speaker makes use of the system in individually distinctive ways. The principal's memo that an achievement test is to be given Friday morning does not "cause" the teacher's hand motions as s/he passes out the test booklets--that behavior is the result of meaning interpretations and choices, deliberate and nondeliberate, that the teacher has made, including the choice not to ignore the memo's injunction.

The task of interpretive research, then, is to discover the specific ways in which local and nonlocal forms of social organization and culture relate to the activities of specific persons in making choices and conducting social action together. For classroom research this means discovering how the choices and actions of all the members constitute an enacted curriculum--a learning environment. Teachers and students in their interaction together are able to (a) make use of learned meaning acquired and shared through acculturation (not only a language system and a mathematical system, but other systems such as political ideology, ethnic and class subcultures, assumptions about gender roles, definitions of proper role relationships between adults and children, and the like); (b) take account of the actions of others outside the immediate scene, making sense of them as structure points (or better, as production resources) around which they can construct local action; (c) learn new culturally shared meanings through face-to-face interaction; and (d) create meanings, given the unique exigencies of practical action in the moment.

Some of these emergent solutions become institutionalized as distinct local traditions. Others of these created meanings are improvised in uniquely concerted ways, given the unique perspectives of *just that local set* of interacting individuals. Indeed, even what can be called "following rules" can be seen as involving more than passive compliance to external constraints. Individuals are not identically socialized automatons performing according to learned algorithmic routines for behavior (such blind rule followers are described by Garfinkel, 1967, as "judgmental dopes" and "cultural dopes" pp. 67-68). Rather, they are persons who act together and make sense, according to the cultural "rules," which, as they enact, they vivify in situationally specific ways. Thus the local microcultures are not static. The microculture can be drawn upon by the members of the local group as they assign meanings to their daily action, but because of the constant, intense dialogue between the interpretive perspective provided by the microculture, the exigencies of practical action in the unique historical circumstances of the present moment, and the differences in perspective among members of the interacting group, the ways in which the evolving microculture can influence the actions of group members in a dynamic process in which change is constant.

From this perspective, in research on teaching it is the surface similarities across classrooms or across reading groups that seem trivial and illusory, rather than as in the standard perspective, in which the local differences I have been describing are seen as trivial--as uninterestingly "molecular" variation that can be ignored in the analysis of general characteristics of effective teaching. Mainstream positivist research on teaching searches for general characteristics of the analytically generalized effective teacher. From an interpretive point of view, however, effective teaching is seen not as a set of generalized attributes of a teacher or of students. Rather, effective teaching is seen as occurring in the particular and concrete circumstances of the practice of a specific teacher with a specific set of students "this year," "this day," and "this moment" (just after a fire drill).

This is not to say that interpretive research is not interested in the discovery of universals, but that it takes a different route to their discovery, given the assumptions about the state of nature in social life that interpretive researchers make. The search is not for *abstract universals* arrived at by statistical generalization from a sample of a population, but for *concrete universals*, arrived at by studying a specific case in great detail and then comparing it with other cases studied in equally great detail. The assumption is that when one sees a particular instance of a teacher teaching, some aspects of what occurs are absolutely generic, that is, they apply cross-culturally and across human history to all teaching situations. This would be true despite tremendous variation in those situations--teaching that occurs outside school, teaching in other societies, teaching in which the teacher is much younger than the learners, in teaching Urdu, in Finnish, or in a mathematical language, teaching marrowly construed cognitive skills, or broadly construed social attitudes and beliefs. Despite this variation, some aspects of what occurs in any human teaching situation will generalize to all other situations of teaching. Other aspects of what occurs in a given instance of teaching are specific to the historical and cultural circumstances of that type of situation. Still other aspects of what occurs are unique to that particular event, and to the particular individuals engaged in it.

The task of the analyst is to uncover the different layers of universality and particularity that are confronted in the specific case at hand--what is broadly universal, what generalizes to other similar situations, what is unique to the given instance. This can only be done, interpretive researchers maintain, by attending to the details of the concrete case at hand. Thus the primary concern of interpretive research is particularizability, rather than generalizability. One discovers universals as manifested concretely and specifically, not in abstraction and generality (see the discussion in Hamilton, 1980). Among anthropologists this point is made in the distinction between *ethnography*, the detailed study of a particular society or social unit, and *ethnology*, the comparative study of differing societies, or social units. The basis for valid ethnological comparison, however, is the evidence found in detailed ethnographic case studies, not in data derived from surveys. (See the discussion in Hymes, 1982, who asserts that educational ethnology rather than ethnography is the most fundamental task for interpretive fieldwork research in education.)

In linguistics, from which the term *concrete universal* comes, the point is made in distinguishing between universal and specific structural features of human languages. One cannot study the topic of human language in general. One finds in nature only specific human languages. Only by detailed understanding of the workings of a specific language, followed by comparative analysis of each language considered as a system in its own right, can one distinguish what is universal from what is specific to a given language. One can begin to distinguish the universal from the specific by comparing languages with differing structural properties, for example, Navaho, Ojibwa, Urdu, Chinese, Yoruba, Finnish, Greek, and English, but only if one understands very thoroughly the organization of each language as a distinct system, through developing a fully specified model of each system. Partial models of each system and a sampling procedure that randomly selected a few sentences from each of the languages would not be an adequate empirical base for studying human language as a general category.

Interpretive social research on teaching presumes that the same obtains for teachers and classrooms. Each instance of a classroom is seen as its own unique system, which nonetheless displays universal properties of teaching. These properties are manifested in the concrete, however, not in the abstract. Such concrete universals must be studied each in its own right. This does not necessarily mean studying classrooms one by one. But it does presume that the discovery of fully specified models of the organization of teaching and learning in a given classroom must precede the testing of generalization of those models to other classrooms. The paradox in that to achieve valid discovery of universals one must stay very close to concrete cases.

For interpretive researchers, then, the central focus of process-product research on teaching on the production of generalizable knowledge seems inappropriate. The following quotation from Brophy (1979) illustrates the way in which the concern for generalization drives the enterprise of process-project research:

> A study involving 20 classrooms studied for 20 hours each is almost certainly going to be more valuable than a study of a single classroom for 400 hours or a study of 400 classrooms for one hour each, other things being equal (i.e., sophistication of research design). (p. 743)

That could only be true if fully specified models had been developed and if classrooms were generically similar enough that subtle variations across them were trivial in what, for lack of better terms, can be called the social and cognitive organization of teaching and learning.

The Mainstream Perspective in Research on Teaching

The history of mainstream positivist research on teaching for the past 20 years has been one of analytic bootstrapping with very partial theoretical models of the teaching process, on the assumptions that what was generic across classrooms would emerge across studies and that the subtle variations across classrooms were trivial and could be washed out of the analysis as *error variance*.

This approach to studying teacher effectiveness can be seen as a borrowing by American educational researchers of an applied natural science model for research and development exemplified by agricultural experimentation.

Research and development using a positivist natural science approach is possible in agriculture because of the uniformity of the phenomena that are considered. While the chemical composition of the soil may very from one field to the next and weather conditions may vary from year to year, the fundamental variables that are considered--chemicals, genetic structures of plants, the biochemistry of plant metabolism and growth--are constant enough in form and bounded enough in scope that it is possible to conduct research and development by the operations of repeated measurement, prediction, and controlled experimental intervention. This is research by means of the design and testing of "treatments" whose effects can be monitored and whose working can be explained by references to a theoretical apparatus of covering laws. In the first *Handbook of Research on Teaching* it was just such theory and research design that was called for in the introductory chapter by Gage (1963) --the positivist model of science borrowed from the natural sciences of psychology, with Hempel providing the fundamental rationale in philosophy of science (see the discussion in Smith, 1979). The first *Handbook* contained what since became the classic article on experimental design (Campbell & Stanley, 1966), according to which an agricultural kind of research and development could be conducted. Campbell extended these recommendations in later proposals for large-scale program development. These were interventions that could be studied as quasi-experiments (Cook & Campbell, 1979).

Twenty years later it seems that there is so much variation across classrooms and so much variation in the implementation of "treatments" themselves that large-scale program evaluation by quasi-experimental methods is very problematic. As that became apparent in study after study, Campbell himself (1978) and Cronbach (1975) called for the use of more naturalistic observational methods--case studies done by participant observers, or "documentation" studies, which would give a detailed view of the actual structure and process of program implementation. At the same time, Bronfenbrenner (1977) was calling for an "ecological" approach to the study of child development, considering the child in the context of family and community life. These approaches, while advocating the use of methods other than those of the experiment or the social survey (testing and measurement in education are considered here as one form of survey research), still did not consider going beyond the bounds of the fundamental natural science paradigm for educational research, with its underlying assumption of the uniformity of nature in social life.

A story similar to that for attempts at large-scale program evaluation can be seen in recent research on teacher effectiveness, in which the classroom was the unit of analysis, rather than the program. This so-called "process-product" research (the term is that of Dunkin & Biddle, 1974) was developed during the late 1960s and early 1970s (see the review of major studies in Brophy & Good, in Wittrock, in press).

The last 15 years of this work can be seen as a search for an increasingly specific look at causal linkages between teacher effectiveness, as measured by end-of-the-year student gain scores on standardized achievement tests, and particular teaching practices.

The teaching practices were monitored firsthand by observers who noted the occurrence of various types of predetermined teacher behaviors and student behaviors (e.g., teacher questions, teacher praise, teacher reprimand, student "on-task" behavior, student "off-task" behavior). In this approach, called *systematic classroom observation*, the types of behavior of interest for observation were chosen according to their theoretical significance. What was "systematic" was the use of predetermined categories themselves. This was to assure uniformity of observation (reliability) across times of observation in the same classroom and across different classrooms. The concern for reliability of measurement reflected the positivist assumptions behind the research.

As the work has progressed, coding categories for a while became more specific and differentiated. Then as certain variables (such as student on-task behavior) seemed to correlate highly with gains in student test scores across multiple studies, the observational systems focused more and more on theoretically salient types of student and teacher behavior, which were generalized functions.

Subsequent experimental "treatment" studies indicated that when teachers increased certain behaviors that were found in the correlational studies to be associated with increased student-achievement gains, those gains occurred in the experimental classrooms. (See the review in Brophy & Good, 1984.) Students in the classrooms receiving the experimental treatments in some cases achieved higher scores on standardized tests than did children in control group classrooms in which the frequency of the recommended teacher behaviors was much less.

This is hopeful news for educators. It suggests that an agricultural model for inquiry into educational productivity is an appropriate one. In the model, the teacher, as Mother Nature, provides the fertilizer, light, and water that enable the students, as plants, to grow tall and strong.

All this seems quite straightforward. Why then might any other form of research on teaching be necessary? Interpretive, participant-observational research is very labor intensive, while observation by use of predetermined coding categories is much less so. It would seem that there is no need for interpretive research or any other. The findings on teacher effectiveness seem to be all in.

That would be a premature conclusion, however. The case for interpretive research is pointed to by some interesting anomalies in the process-product work.

One such anomaly lies in the corpus of process-product data itself. Apparently, in correlational studies of the same teacher across school years, the stability of teacher effects on student achievement is not high (see the discussion in Brophy & Good, 1984). This could be due to a number of influences, for which there is no evidence in the correlational data sets, for example, teachers teaching somewhat differently with each new set of students, stress in the teacher's life outside school, (e.g., birth of child, death in family, divorce, remarriage), stress or change in the school itself (e.g., introduction of new reading series, change of principal). The process-product data do not indicate why teacher influence seems to vary from year to year. Another anomaly is that in spite of evidence that indicates that certain teacher behaviors can influence students to learn more, and in spite of experience that shows that teachers can be trained to use those behaviors more frequently, teachers do not always persist in using the recommended behaviors. Sometimes they do, but sometimes they do not. An example of this is Rowe's finding (1974) that waiting longer for student answers produces more reflective answers by students. Teachers can be told this and trained to pause for a longer "wait-time," yet after a few months they go back to using shorter wait-time in lesson dialogue with students. One wonders if wait-time might not have negative meaning to teachers in the concrete circumstances of conducting classroom discussion. Such a concrete, enacted meaning might override whatever more abstract and decontextualized meaning that wait-time behavior might have as generally correlated positively with student learning. How do teachers make sense such that a behavior like wait-time seems sociolinguistically inappropriate? What are the intuitions about interaction against which doing wait-time behavior runs counter? How might these intuitions be changed--or is there another behavioral means that might provide a less counterintuitive route to the same ends? Those are questions about the specifics of practice that derive from the perspectives of interpretive research.

These kinds of anomalies suggest that while the standard work has produced some insights about general characteristics of effective teaching, researchers may have learned about all that is possible by proceeding with that theoretical frame of reference and the methods that derive from it.

An Interpretive Perspective on Teacher Effectiveness

The use of predetermined coding categories by process-product researchers presupposes uniformity of relationships between the form of a behavior and its meaning, such that the observer can recognize the meaning of a behavior time after time. Imagine a student sitting at a desk, looking out the window. What does this mean? Is the student on-task or off-task? One must infer meaning from the observed behavior. What are the grounds for such inferences?

When they must be made in split-second judgments by coders, what evidence does one have that such inferences about meaning are valid? The fundamental problem with the standard approach to observational research on teacher effectiveness, from an interpretive perspective, is that its evidence base is invalid. Surface appearances are taken as valid indicators of intended meaning. In consequence, what are claimed to be low-inference observational judgments are in fact highly inferential. Once the data are coded there is no way to retrieve the original behavioral evidence to test the validity of the inferences made about the behavior's meaning (see the discussion on this point by Mehan, 1979). No matter how strong the correlations appear to be in such data sets, a good possibility always exists that such correlations are spurious, if relationships between behavioral form and social meaning are as variable as interpretive researchers claim them to be. Moreover, if such variability is inherent in social life and thus omnipresent in classrooms, experiments that purport to manipulate teacher and student behaviors, so globally defined, are likely to be shot through with confounding relationships between putative "treatment" conditions, "control" conditions, and "outcomes" that invalidate the causal inferences made.

The standard research on teacher effectiveness could only proceed as it has done on the presupposition of uniformity of nature in social life that follows from adopting natural science models for social scientific inquiry. Interpretive research makes very different assumptions. It looks for variability in relationships between behavioral form and intended meaning in classroom interaction. Moreover, interpretive research on teaching repeatedly discovers locally distinctive patterns of *performed social identity*--of enacted statuses and their attendant role relationships, such that a phenomenon like time-on-task is locally meaningful in terms of the particular performed social identities of the actual students spending time on the academic tasks assigned to them. If Mary, a high achiever, is observed by the teacher to be off-task at a given moment this may mean something quite different from Sam, a problem student, being observed as off-task in the same moment. One of Sam's obligations as a problem student (who is perceived as often being off-task) may be to be constantly on-task (since this will be "good for him"). Mary, on the other hand, who as a high achiever is perceived as (by definition) being on-task most of the time, does not have Sam's obligation to be constantly on-task. Indeed Mary has earned the right to take occasional breaks--time off-task. One is reminded of the differences in work rights and obligations between hourly wage employees, who punch a time clock, and salaried workers, who do not. Yet even the role distinction between Sam and Mary is not entirely absolute. Some mornings, if Sam is having an unusually good day (i.e., if he appears to be working diligently and constantly) he may have earned, for that morning, the right to take a break, like Mary, the salaried worker.

The contrast between the interpretive and the standard perspectives can be further illustrated by considering classroom social organization in terms of the metaphor of a chess game. Standard research on teacher effectiveness presupposes a standard board (curriculum and aims), a standard set of chess pieces (statuses of teacher and student), and a standard set of rules of procedure that govern the relations among the pieces (roles of teacher and student) that are appropriate, that is, possible within the game. Interpretive researchers presume that the board itself, the number and shapes of its "squares"--places to be in the curriculum--will vary from one classroom to the next, although on the one hand, with the publication of textbooks for reading and arithmetic with teacher's manuals and accompanying worksheets for students, and on the other hand, with accountability systems for management by objectives and continual achievement testing, there seems to be more pressure for uniformity of curriculum and aims than there was a generation ago.

Even if one grants a superficial uniformity of the board itself, when one comes to the direct observation of actual playings of the game--observation that is unmediated by predetermined coding categories--one finds that the types of pieces vary from game to game. In one game there are many pawns, few knights, and no bishops. In another game there are no pawns, many knights, and many bishops. Since each type of piece is allowed to move differently on the board, the system of possible movements--the system of social relations--changes from game to game. Moreover, some interpretive researchers would argue that the differences among games, as they are actually played, are even more profound than the differences that would obtain if it were only a matter of having a different board or different pieces from one game to the next. If within a given game, neither the board nor the pieces are themselves entirely fixed--if the definitions of aims, curriculum, and the social identities and roles of teachers and students are constantly emergent in negotiation within the action of teaching and learning itself--then the school classroom is indeed a fundamentally different kind of social universe than the stable, fixed and unidimensional one presupposed by positivist research on teaching.

It is as if in the chess game, the White Bishop has a mistress, the Red King knows this but the White King doesn't, and the Red King chooses at some times to take advantage of his knowledge to pressure the White Bishop through blackmail, while at other times the Red King chooses to ignore the White Bishop's secret. To see the school classroom as a chess game that is multidimensional, filled with paradox and contradiction from moment to moment and from day to day, is to see the school classroom, and teaching, as a game of real life. The study of classrooms, interpretive researchers would argue, is a matter of social topology rather than social geometry.

A central task for interpretive, participant-observational research on teaching is to enable researchers and practitioners to become much more specific in their understanding of the inherent variation from classroom to classroom. This means building better theory about the social and cognitive organization of particular forms of classroom life as immediate environments for student learning.

Conclusions drawn from process-product research can suggest in general terms what to do to improve student achievement, but these general recommendations give neither the researcher nor the practitioner any information about how, specifically, to do what is called for. Some examples of recommended teaching behaviors are found in a recent review article by Rosenshine (1983):

> Proceed in small steps (if necessary) but at a rapid pace.
>
> High frequency of questions and overt student practice.
>
> Feedback to students, particularly when they are correct but hesitant.
>
> Corrections by simplifying questions, giving clues, explaining or reviewing steps, or reteaching lost steps.
>
> Need for procedure to ensure student engagement during seatwork (i.e., teacher or aide monitoring). (p. 338)

The teaching functions called for by Rosenshine are global; for example, give feedback, simplify questions to correct, insure student engagement during seatwork (i.e., insure time on task). The functions could be performed in a myriad of different ways, appropriately and inappropriately, on differing occasions. How to understand what might be appropriate and what not, in specific cases, goes beyond the bounds of standard research on teacher effectiveness.

In considering issues of teacher effectiveness interpretive researchers might ask, "How is time on task manifested in different classrooms and at different times by different students within a given room? What is clear feedback, from differing student points of view and teacher points of view? How is any one of the differing possible ways of giving clear feedback actually done, in the concrete circumstances of communication face to face or in writing between teacher and students? For that matter, if relationships between teacher and student are fully interactional (i.e., reciprocal), how do students give teachers clear feedback? How do student actions influence teacher productivity--the teacher's time-on-task?"

To conclude, there are three very serious problems with standard process-product research on relationships between classroom interaction and student achievement. The first problem is that the work proceeds from an inadequate notion of interaction--one-way causal influence as a behavioral phenomenon, rather than reciprocal exchange of phenomenologically meaningful action. The second problem is that the standard work gives an extremely reduced view of classroom process. Its use of predetermined coding categories as a means of primary data collection gives no clear detailed evidence about the specific classroom processes that are claimed to lead to desired outcomes. The third problem is that the product studied is also very narrowly defined--usually as end-of-the-year achievement test scores. With the standard approach to the study of teacher effectiveness having provided so reduced and one-dimensional a view of classroom processes, classroom products, and classroom interaction itself, it is not unreasonable to claim that the final word has not been spoken on this issue in research on teaching.

From an interpretive point of view, teacher effectiveness is a matter of the nature of the social organization of classroom life--what interpretive researchers have called the enacted curriculum--whose construction is largely, but not exclusively, the responsibility of the teacher as instructional leader. This is a matter of local meaning and local politics; of teaching as rhetoric (persuasion), and of student assent as the grounds of legitimacy for such persuasion and leadership by the teacher. As Doyle (1979) puts it in a felicitous phrase, students in classrooms are not the "passive recipients of instructional treatments." (p. 203)

In sum, issues of local politics at the classroom level seem to be at the heart of educational decision making by teachers and by students. Moreover, one can use the notions of politics and persuasion to consider an essential activity of schools as institutions, that of social sorting.

Power, Politics, and the Sorting Functions of Teaching

The sorting activities of schools occupy central interest in interpretive research on teaching. In developed countries, the availability of universal public schooling is a means justifying the allocation of individuals across generations across the range of occupational slots available in the society. Both conservative sociologists such as Parsons (1959), liberals such as Clignet and Foster (1966) and radical sociologists such as Willis (1977) and Bourdieu and Passeron (1977) agree on the importance of this sorting function. Opinion differs over whether or not a particular society's school-sorting procedures are justifiable or not on grounds of fairness to individuals and groups. According to liberal social theory, school-sorting procedures would be fair if they were universalistic, that is, if sorting criteria applied to individuals as individuals, along dimensions of comparison that apply universally to all persons regardless of such attributes of status as gender, race, social class, or religious preference.

From the early work (e.g., Henry, 1963) through the recent work of Willis (1977), much fieldwork research in education has been concerned with identifying the particularistic bias inherent in the putatively universalistic standard operating procedures of schools. At the classroom level, fieldwork has investigated the particularistic bias that is implicit in the kinds of environments that are established by teachers. The presumption is that the low school achievement of social and cultural minority students is better explained by considering the character of the classroom learning environment than by attributing the typical pattern of school failure of those children to deficiencies in individual intelligence and motivation.

For anthropologists especially it has seemed odd that in developed societies the school failure rate is so high among the majority of the population, who are of working class or underclass status. This pattern stands in sharp contrast to that found in various nonliterate societies, in which almost everyone in the society acquires the knowledge and skills necessary for survival according to the pattern of adaptation developed in the particular society. That may have been true in nonliterate societies for the five million years of human evolution. Wolcott (1982) quotes Gearing in a question to modern societies, "It's something of a wonder that anyone ever learns anything. But given that they do, then we can also ask why everybody doesn't learn everything?" (See also Gearing & Sangree, 1979, p. 1). Is this because socialization of the young is done more effectively in nonliterate societies? Is the apparent difference in the success of teaching and learning somehow due to the difference in scale between large, developed societies and small, nonliterate ones? Or might this difference also have to do with something about the institutionalization of teaching and learning in the school as a formal organization? Or, because the school failure rate is highest among the lower classes, is there something wrong with them?

One possibility is that lower class and minority populations are genetically inferior, that across generations gene pools have developed in these populations that produce, on the average, an overrepresentation of individuals of lower intelligence than those found in populations of white, upper-middle-class Americans. This *genetic-deficit theory* was proposed in the late 1960s by Jensen (1969).

Another possible explanation lies in a family *socialization-deficit hypothesis*. If life circumstances of the poor are difficult and if their vision of life possibilities is limited, families of the poor may not provide children with the amounts of intellectual stimulation and motivation for achievement that middle-class families provide. Socialization-deficit hypotheses were proposed during the 1960s under the labels of "cultural deprivation," "linguistic deprivation," and "family disorganization" (e.g., Riessman, 1962). It was argued that school subjects and intelligence tests required abstract thought and that lower class families developed only concrete reasoning skills in their children. Numerous studies were conducted by child development researchers in which invidious comparisions were made between the child-rearing patterns of lower-class and middle-class families (e.g., Hess & Shipman, 1965).

In the United States and Great Britain a large body of literature developed that criticized the genetic and socialization-deficit hypotheses, characterizing them as "blaming the victim" (see Keddie, 1973). The argument over the socialization-deficit hypotheses tended to be conducted across disciplinary lines. Much of the deficit-oriented research and the prescriptions for teaching practice that followed from it was done by psychologists in the fields of education and child development. Much of the critique of the deficit hypotheses came from anthropologists, sociologists, and linguists. Cole, a notable exception, was a cognitive pychologist who conducted cross-cultural research that showed that nonschooled people often simply did not know the point of school-like tasks used in intelligence tests, by which they could be assessed as mentally deficient when in fact they were just using a different way of making sense (Cole & Scribner, 1974; Scribner & Cole, 1981).

Anthropologists and sociologists with linguistic training found the school failure rate among low-SES and minority populations in developed societies especially odd in light of what was coming to be known about the cognitive demands of first language acquisition by children. It was apparent that virtually every child who is not severely impaired physically or neurologically comes to school at age five having mastered the basic structure of the language spoken at home, its grammar and sound system. Linguists had contended that less prestigious regional, social class, and racial dialects were no less cognitively complex than the standard language spoken in school (cf. Labov, 1972; Erickson, 1984).

Modern language-acquisition theory viewed mastering the grammar and sound system of a language as necessarily requiring complex, abstract, cognitive abilities, even though the thinking that took place was outside conscious awareness. Given that mastery of the speaking knowledge of a language was far more cognitively complex than beginning to learn to read the written form of that language, how was it that many children appeared to have great difficulty with simple, beginning reading? Children of low-SES and of ethnic, racial, and cultural minority background could be seen, in school and outside it in the home and local community, to be able to speak much better than they could read. What might account for this?

One line of explanation, proposed by anthropologists, linguists, and some sociologists, was that subtle subcultural differences between the community and the school led to interactional difficulties, misunderstandings, and negative attributions between teachers and students in the classroom. The preponderance of this work identified specific cultural differences between teachers of majority group background and low-SES, minority group children. The cultural differences consisted principally in implicit assumptions, learned outside conscious awareness in everyday life in the home and in the community, about the appropriate conduct of face-to-face interaction. Some of the basic properties in the organization of interaction that were investigated, (often through comparative studies of children's lives at home and at school), were phonological and grammatical dialect features in children's speech that teachers had difficulty understanding (Piestrup, 1973), as well as children's means of showing attention and understanding through nonverbal behavior such as gaze and nodding (Erickson, 1979), and differences in the organization of turn-taking in conversation that lead to overlapping of speakers or to long pauses between turns (Shultz, Florio, & Erickson, 1982; Watson-Gegeo & Boggs, 1977).

Mehan (1979) published a study of question-answer sequences in school lessons that revealed the tremendous complexity involved in managing such conversation. His analysis suggested the possibility of miscommunication due to different cultural expectations for the fine tuning of classroom discourse. The global aspects of interaction patterns that differed between home and school were also identified. These had to do with the cultural organization of social relationships in communication, that is, with foundational definitions of appropriateness in leading and following, in adult roles and in child roles. Among the topics investigated were differing cultural assumptions about the appropriateness of indirectness and directness in (a) the exercise of social control and in the use of a "spotlight" of public attention by asking content questions of named individuals (Erickson & Mohatt, 1982; Philips, 1982); (b) in the very situation of an adult asking "teacher-like" questions of a child--questions the child can presume the adult already knows the answer to (Heath, 1982); (c) in the differences in assumptions about the appropriateness of competitiveness and in cultural definitions of students offering and receiving help from one another as showing laudable concern for others or as cheating; and (d) in cultural notions of appropriateness of humor and mock aggression in discourse (Lein, 1975).

Taken together, cultural differences between home and school that have been identified at the level of basic structural properties in the organization of interaction, and at the level of global differences in assumptions about appropriate role relationships between adults and children, involve fundamental building blocks, as it were, of the conduct of classroom interaction as a medium for subject-matter instruction and for the inculcation of culturally specific values--definitions of honesty, seriousness of purpose, respect, initiative, achievement, kindliness, and reasonableness. When students act in ways that do not match the classroom teacher's cultural expectations, the children's behavior can be perceived by the teacher as frustrating, confusing, and sometimes frightening. Given the teachers' and the students' recurring difficulties in interacting together from day to day, an adversarial relationship is likely to be set up between the teacher and the student. This would inhibit the teacher's ability to learn from the students--to assess accurately what the students know, what they want educationally, and what they intend interpersonally in social relations with the teacher.

Recent work in Alaska and Hawaii appears to support the cultural-difference hypothesis. In both cases, as teachers have interacted with students in the classroom in ways that resemble those that are culturally appropriate in the home and community, student achievement on standardized tests has increased dramatically. The Alaskan study (Barnhardt, 1982) reports the situation in a small village school in the Alaskan interior. Achievement by Athabaskan Alaskan native children of the village was low until Alaskan native teachers began to teach in the three classrooms of the school: Grades 1-2, 3-4, 5-6. After the native teachers arrived, student achievement rose dramatically in all three classrooms. Subsequent participant observation and videotape analysis revealed that the teachers organized instruction and interacted with students in ways that were culturally appropriate. Exercise of social control was for the most part very indirect, and the teachers usually avoided public reinforcement--not only avoiding negative reinforcement of children's actions, but avoiding overt positive reinforcement as well. These patterns are typical of child-rearing in the community and resemble those reported in Oregon and Northern Ontario by Philips (1982) and by Erickson and Mohatt (1982). The patterns found in the Athabaskan classrooms resemble patterns documented in Alaskan Eskimo classrooms by Collier (1973).

From this study it is not absolutely clear that the cultural patterns of instruction were the main influence on increased student achievement, since the native teachers at the school were also lifelong residents of the village, and their presence in the role of teacher may have increased rapport with parents and changed the climate of family and community expectations for children's school achievement. Still the evidence is highly suggestive that not only were the new teachers local natives, but they also taught children in forms of interaction that resembled those that were appropriate in family and community life outside the school.

In the Hawaiian case, evidence supporting the cultural difference hypothesis is even more clear than in the Alaskan case. In an innovative school program developed for native Hawaiian children, researchers discovered that when the children were allowed to use overlapping speech while discussing reading stories in reading groups, their reading achievement rose. Previous ethnographic research had established that overlapping speaking turns was characteristic of certain kinds of conversations in the community (Au & Jordan, 1980). In subsequent experimental research (Au & Mason, 1981), material of equivalent difficulty was taught under two different conditions of social organization of discourse. In one condition the teacher allowed the students to overlap one another's speaking turns while discussing the reading story. In the other condition the teacher did not allow overlapping speech during the discussion of the story. The children's achievement was clearly higher under the first condition, in terms of proximal indices of achievement, such as error rates during the lesson, and in scores on tests administered directly after the lesson. In subsequent development work this alternative procedure for teaching reading, which incorporates culturally congruent discourse patterns into the overall design for reading pedagogy, is now being implemented in public school classrooms with native Hawaiian children. Similar positive results in student achievement have occurred, as indicated both by proximal indices of achievement and in end-of-the-year scores on standardized tests.

What might account for these results, theoretically? One line of explanation concerns the nature of face-to-face interaction as a learning task environment. In interaction in school lessons, a dimension of culturally patterned social organization (patterns for turn-taking, listening behavior, and the like) always coexists with the dimension of the logical organization of the information content of the subject matter. The two dimensions--social organization and subject matter organization--are always reflexively intertwined in the enactment of a lesson. (For full discussion, see Erickson, 1982a, 1982b.) One reason that cultural congruence in the social organization of interaction in lessons seems to lead to higher student achievement may be that when the social organization of lesson interaction happens in ways that are culturally customary--already mastered through overlearning in daily life outside school--this simplifies the task environment of the lesson, allowing children to concentrate more fully on the subject matter content. In other words, lessons may be easier for children when their social organization dimension is clear and familiar.

This theory of lesson interaction as a social and cognitive task environment may provide an alternative explanation to the finding that highly ritualized lesson interaction formats appear to lead to higher achievement by cultural minority children even if the lesson formats are not congruent with cultural patterns for the social organization of interaction that are found in the student's home and community. Stallings and Kaskowitz (1974) report this finding in the evaluation of alternative models for Follow Through. The DISTAR (Direct Instruction System for Teaching Arithmetic and Reading) instruction format, highly ritualized and not culture-specific, seems to result in higher student achievement, even for cultural minority populations for which the lesson format is quite culturally alien, as in the case of native Americans. The DISTAR format may have this result, not because it happens to fit a direct-instruction model, but because the format by its very ritualization is so clear and easy to learn that it is soon mastered by children. Once learned, the ritual format would simplify the lesson as a task environment.

Indeed, the communication of a teacher's expectations for the conduct of interaction in ways that are clear and predictable, and the establishment of implicit or explicit consensus between the teacher and students that these ways of interacting are just, may be the fundamental feature that characterizes both the culturally incongruent teaching strategies, such as DISTAR, and the culturally congruent ones, such as the Kamehameha reading program in Hawaii. If clarity is of the essence, and if clarity can be achieved by instructional means that are culture specific and culturally congruent, as well as by means that are culturally incongruent, then a wider range of policy options becomes available for improving the academic performance of cultural minority students.

The cultural-difference hypothesis assumes that differences in expectation for the conduct of interaction are a systematic source of breakdowns in interaction that is analogous to the notion of *linguistic interference* in second-language acquistion. When features of the grammar and sound system of two languages differ, one can predict the likely recurrence of certain types of structural errors. For example, if in some language other than English the /th/ sound does not occur, but the /d/ sound does occur, one can predict that a speaker will consistently say "dis" for "this" when speaking English. Or if in some language other than English gender reference is signaled by some means other than alternate pronouns, one can predict that the speaker will substitute "he" for "she" and vice versa, when speaking English. Analogously, one can predict that a teacher who is not used to overlapping speech in conversation (such as that found among working-class native Hawaiians and Italian Americans) will interpret the overlapping talk as interruption, even though the children do not interpret the behavior of overlapping talk as an interruption. It follows, then, that culturally congruent social organization of instruction can reduce the situations of interactional interference that occur in the classroom and that the reduction of these interactional difficulties increases student opportunity to learn and decreases misunderstanding between teacher and student.

But if interactional interference, by itself, is the chief factor that inhibits student learning, how can one explain the results of the Follow Through evaluation? How does one explain reports of other instances of culturally incongruent instruction that appear to raise student achievement? One such instance is reported in a case study of a residential school for Alaskan natives in which instruction was conducted in culturally incongruent ways and yet in which student motivation and achievement were high (cf., Kleinfeld, 1979). It would seem that interactional difficulty and miscommunication is not simply a matter of structural interference between cultural patterns of the community and of the school.

A possible explanation lies in considering as a political phenomenon the local microculture and social organization of classroom life and its relation to student learning. If one thinks of classroom teaching and learning as a matter of local politics, some relationships between cultural difference or similarity, social relationships among teachers and students, and student learning begin to appear. These relationships are much less clear when one thinks of teaching and learning as a matter of individual psychology (whether behaviorist, cognitive, or social), or even in terms of the sociology and anthropology of the classroom as an ecosystem. When one considers individual functioning in the context of a sociocultural ecosystem, one has a framework for an anatomy of classroom teaching and learning. When one considers the dynamic operation of the ecosystem as a political process, one has a physiology of teaching and learning. Central to such a framework are the concepts of power, authority, influence, competing interests, legitimacy, assent, and dissent.

Power, as the ability to coerce the actions of others, is potentially possessed both by teachers and by students in the classroom. Authority, the legitimate exercise of power and focus of socially sanctioned knowledge and judgment, resides officially with the teacher. Influence, the unsanctioned capacity to exercise power, resides with students. Every person who has attempted to teach faces the reality of student influence in relation to teacher authority. Even in institutional arrangements of schooling that vest the teacher with virtually unchecked authority (traditional religious instruction being a vivid case in point), the exercise of that authority in the absence of student assent can at best lead to outward conformity to the teacher's will, that is, in a teaching situation the student always possesses the ability to resist by refusing to learn what the teacher intends should be learned.

The teaching-learning transaction, then, can be seen as an inherently political and rhetorical situation, in which at least the implicit consent of the governed must be gained by the governor through persuasion. The teacher must somehow persuade the followers that his/her guidance is legitimate and in the student's own interest. If the student perceives his or her interest to be fundamentally in conflict with that of the teacher, and if the student resists the teacher by withholding learning, the teacher is unable to teach. Thus in the classroom social system as a political economy, the power to withhold the currency that is essential to the system--student learning--ultimately resides with the student. This is true even if student resistance is covert and the student does not engage in more overt forms of protest. The interactional sabotage we call "discipline problems" can be seen as a form of interactional judo--control of the ostensibly stronger party by the ostensibly weaker one.

A crucial question for educational research then becomes, what are the conditions of micropolitics in the social organization of classroom life that set off a contest of wills between teacher and students in which the students refuse to learn what the teacher intends to teach? Some student failure may indeed be due to lack of student ability or motivation that lies outside the teacher's ability to change, as the conventional wisdom of educators and educational psychologists suggests. But some student failure may be more accurately seen as a matter of micropolitical resistance. The over-representation of student failure to learn simple knowledge and skill among low-SES and cultural minority populations of students is suggestive in this regard.

The interpretation of school failure as evidence of self-defeating resistance rather than as evidence of inadequacy on the part of students has been most consistently maintained by British sociologists of education, who see the production of student failure in schools as necessary for the maintenance of the existing class structure in society. In a recent review (1983) Giroux surveys this work. He makes the critical point that it is important to restrict the notion of resistance and not use the term loosely to refer to any sort of inappropriate or self-defeating action by a student or by a teacher.

In the United States this position has been asserted in a series of papers by McDermott (McDermott, 1974, 1977; McDermott & Gospodinoff, 1981) in which he criticizes both the family-socialization-deficit hypothesis and the cultural-difference hypothesis as explanations for school failure. His argument derives in part from psychiatrists' theories accounting for the generation of psychopathology in family relationships. One of McDermott's principal sources was Scheflen's adaptation (1960) of Bateson, Jackson, Haley, and Weakland's theory (1956/1972) of the interactional "double bind" as the cause of schizophrenia in children. An analogue to Scheflen's position is found in the work of Laing (1970). In the pathological family certain family members become locked in patterns of regressive relations with other family members. The situation is not caused by the action of any single individual. The entire family system--its locally negotiated and maintained system of statuses and roles--supports and maintains the adversarial relationship between the parties who are manifestly at odds.

To return to the chess metaphor for the social organization of face-to-face relations, pawns, knights, and kings by their patterned actions enable each other to act in concert. One sees similar situations in which individuals become locked into relationships that are mutually punitive or are mutually destructive in other ways: in bad marriages, in alcoholic or abusive families, in recurrent difficulties in relations between a supervisor and a subordinate in a work group. Over time, interpersonal conflict develops a history. It ramifies throughout the whole social unit of interacting individuals. McDermott contends that this is what happens in school classrooms among teachers and students who, for the most part unwittingly, are mutually failing one another. The student can be seen as playing an active role in this as student and teacher collaborate in producing a situation in which the student achieves school failure (McDermott, 1974).

Another source of McDermott's position comes from recent work on interethnic relations in two-person interview situations (Erickson, 1975; Erickson & Shultz, 1982). Shultz and I found that in interethnic and interracial interviews between junior college counselors and students, certain kinds of cultural difference in communication behavior (e.g., differences in signaling attention and understanding through nonverbal listening behavior) were associated with other kinds of interactional trouble and negative interpersonal attribution in some interviews, conducted by a given counselor, yet in other interviews conducted by that counselor with students whose ethnic or racial background and cultural communication style matched that of the students with whom the counselor had had trouble, the same features of culturally differing communication behavior that had led to trouble with one student did not lead to serious, ramifying interactional difficulty with another student. Even though momentary difficulty due to culturally differing behavior styles could be observed, the trouble that occurred was soon recovered from. It did not escalate the way it did in other interethnic or interracial interviews conducted by the same counselor. This suggested a micropolitics of cultural difference in interaction. (For a discussion of the role of culture difference in the larger-scale politics of interethnic relations, see Barth, 1969.) Under some circumstances, cultural differences in communication patterns became a resource for interpersonal conflict, while in other circumstances the same kinds of behaviors were not reacted to and made use of as a resource for conflict. A simple interference explanation for the negative effects of cultural difference on the conduct of interaction was inadequate to explain our data.

The significance of cultural difference as an inhibiting factor in classroom teaching and learning may be that cultural difference can function as a risk factor. As a source of relatively small interactional difficulties, cultural differences can become resources for the construction of much more large-scale and widespread conflict between teachers and students. It is in this sense that cultural differences along the lines of social class, ethnicity, race, gender, and handicapping conditions can play a role in the creation of classroom situations in which some students withhold learning as a form of resistance to teachers.

To summarize, a wide range of explanations exist for the high rates of school failure in developed societies. At one extreme are explanations that presume a radical individual determinism. These explanations identify some deficit in the individual learner, whether due to genetic inheritance or to environmental socialization, as the primary cause of school failure by students. A related set of explanations identifies similar deficits in the individual teacher, identifying the teacher as primarily responsible for student failure. This is the implication of the process-product research on teaching, which suggests as a policy conclusion that individual teachers who are instructionally ineffective need either to be retrained or to be removed from the classroom.

At another extreme are explanations that presume a radical contextual or societal determinism as the source of school failure. These explanations identify the inequitable distribution of power and privilege in society as the root cause of school failure of low-SES and cultural minority children. Schools function, these theorists argue, as passive sorting mechanisms that reproduce the social class position of individuals from one generation to the next (see, e.g., Bowles & Gintis, 1976). In the absence of widespread change in power relations along the lines of social class, race, and gender, school achievement patterns will not change and any minor changes in achievement at the classroom level that might result from remedial work with teachers and students are at best trivial and at worst pernicious, since they would mask the need for fundamental social change. Currently the aim of boring drill and denial of opportunities for independent reasoning in classrooms is to produce a docile work force from the compliant students and to justify the existence of a permanently unemployed underclass made up of noncompliant students, who resisted by refusing to learn.

A middle position is taken on this issue by many interpretive researchers. Such a position attempts to acknowledge the reality of individual differences in aptitude and motivation for learning, the reality of cultural differences and their micropolitical significance as it varies from classroom to classroom, the reality of the sorting functions of schools, as well as the reality of the functions of schools to stimulate learning and broaden opportunity among students whose life circumstances are limited and who are thus at risk for school failure. Many interpretive researchers acknowledge that the tension for the classroom teacher between the responsibility to be the student's impartial judge and the responsibility to be the student's advocate is an inherent source of tension in the role of the teacher as it is institutionally defined in the United States. This contradiction in the teacher role, identified more than a generation ago by Waller (1932), can be seen as genuinely inherent as a paradox that is not reducible. In Japan and in other educational systems in which examinations are centralized and are administered by an agency external to the classroom, the teacher's role is not so contradictory as it is in the United States. In Japan the teacher prepares the student for the examinations, functioning as the student's advocate throughout the process of elementary and secondary schooling (Vogel, 1965).

No univocal social theory, whether conservative, liberal, or radical, provides by itself an adequate explanation for phenomena of school achievement in the United States. According to conservative social theory the essential inferiority of the lower classes as less intelligent and hard working than the higher classes is evidenced by the manifest class differences in school achievement. According to liberal social theory, inequities currently exist in school sorting practices, but if sorting were done more objectively according to universalistic judgment criteria the schools could provide equality, or equity, of opportunity. According to radical social theory, changes in school sorting practices can only result after fundamental social change since the current sorting practices serve to legitimate current class divisions and are thus maintained at the school system and classroom level by pressures from the wider society.

Interpretive research accommodates the reality of the local organization of teaching and learning at the classroom level, together with the reality of external pressures on the organization of the classroom. Both levels of organization must be encompassed, theoretically and empirically, in an account of the micropolitics of classroom organization, within which low-SES minority children fare more or less well from one classroom to the next.

This suggests a set of issues and questions for future interpretive research on teaching. One must ask what are the specific features of social organization and meaning that arise in a given classroom ecosystem, the enacted hidden curriculum of social organization and the enacted manifest curriculum of subject-matter organization, which must be considered together. One can ask about the relation of this enacted curriculum to the range of kinds and amounts of student learning that take place. Learning here can include cognitive learning of subject matter, but the notion of learning would not be limited to this single aspect. To study these issues it would be necessary to ask what the specific conditions are by which teachers and students construct local social organization in ways that increase or decrease differing specific kinds and amounts of student resistance to learning the manifest curriculum. One can consider how this situationally embedded, locally produced resistance to learning (and other kinds of difficulty in learning) varies by class, race, ethnicity, and gender. One can consider the ways in which the situationally embedded informal classroom social system--the statuses and roles available to students in it, the locally produced resistance to learning and other sources of learning difficulty--is organized in relation to statuses external to the classroom, such as class, race, ethnic, and gender identity. One can consider how all the local social organization relates to nonlocal, external sources of influence and how the settings exterior to the classroom are influenced by what happens inside the room. One can ask how all this relates to student learning and to teacher morale.

Such study can begin with the assumption that learning and teaching are intrinsic to the biological and social foundations of human adaptation, within the life cycle and across generations. Learning, it can be assumed, is not optional for humans, and one would not expect it to be so for students in classrooms. The basic issue is not that some students learn and others do not. One can assume that all students are learning something. The basic issue is that many students, for a variety of different reasons, do not appear to be learning what the teacher and the school claim to be teaching. Both the claims regarding what is being taught and the claims regarding what is being learned need to be scrutinized in the context of the wider societal influences and the local meaning systems that are created as teachers and students influence one another in the teaching and learning environment of enacted curriculum, the specifics of which must be identified because they vary from classroom to classroom as does student achievement. The core issues in teacher and student effectiveness concern meaningfulness--the grounds for legitimacy and mutual assent--rather than causation in a mechanical sense. The inquiry involves a search for interpretive understanding of the ways in which particular individuals engage in constructing patterns of action and meaning by which they enable one another to accomplish desired (or undesired) ends. The particular means they construct for collaboratively accomplishing those ends are expected to vary across each specific classroom and within classrooms from year to year. There may be universal principles of organization by which people collectively foster or inhibit the accomplishment of their stated goals. These, it is assumed, can only be discovered by studying particular instances in close detail, since the universal principles are realized in ways that are locally unique.

Finally, such study must also link the immediacy of the local lives of students and teachers, inside and outside the classroom, to nonlocal and general aspects of social structure and culture. For the interpretive, participant-observational researcher, this must be done by looking out from the classroom to the wider world, as well as looking in to the classroom from the wider world, as functionalists and radical critics both tend to do.

One of the most immediate places to look outside the classroom is the student's own family and local community. Many claims are made about the influence of the home and community on the child's learning in the classroom. It may be that the main reason for differences in student achievement according to class and parent's educational background is that parents who are higher in SES and in education know how to coach their children in school subjects, while parents who are lower in SES and in experience with educational success themselves do not know how to do this coaching. It may be that parents who are higher in SES and in educational attainment model the meaningfulness and usefulness of knowledge and skill that are acquired in school, while parents of lower SES and educational attainment do not model this. It may be that, as Ogbu (1978) asserts, parents and other members of a caste-like minority group with a pariah status in the society, such as American blacks, communicate a sense of hopelessness to their school-age children, while parents and other members of a non-caste-like minority group (such as the American Chinese) communicate the more hopeful belief that school success is the route to adult success. The caste-like minority student, according to Ogbu, by failing to strive, plays an active role in achieving school failure. (There is something that strikes one intuitively as realistic in this hypothesis, in its portrayal of the low-achieving student as an active agent in the construction of his or her own victim status. In that sense Ogbu's hypothesis is reminiscent of that of McDermott.)

Currently, however, there is no substantial body of empirical evidence against which to judge these claims. To test any of these assertions one would need specific knowledge of the life experiences of students who vary in educational achievement within the same classroom and within class, racial, ethnic, and gender categories. There are a few studies that have begun to investigate students' lives outside school in relation to their lives inside school, notably that of Heath (1983), as well as studies mentioned earlier in this discussion. These studies have not focused specifically on variation in classroom achievement *within as well as between* demographic background factors such as class, race, ethnicity, and gender, among students from the same classroom. To test Ogbu's hypothesis, for example, we would need to follow high-achieving and low-achieving American black students from the same classroom, as well as high-achieving Chinese American students from the same classroom, to see if the high-achieving black and Chinese-American students were receiving a qualitatively different set of implicit and explicit messages about achievement attribution than were the low-achieving black American students. It hardly seems possible that the low achievement pattern among low-SES black students is explained by so simple a matter as the presence of significant others who say to the student, implicitly or explicitly, "You can't make it no matter what you do." How consistent are such messages? How do they relate to the messages in the meaning system of the classroom? How does Ogbu's hypothesis account for the fact that in some classrooms low-SES black students do better than they do in other classrooms? The relationships between what happens in students' lives outside and inside the classroom and the relations between that and school achievement are not at all clear.

The same is true for teachers. In recent work, Cusick (1980) asserts that teachers in two public high schools he studied voted on curriculum issues differently depending on the ways in which a particular curriculum decision might affect a second job they held or a strong avocational interest they had. One does not know the ways in which teachers who are parents of children may be influenced in their teaching by the demands (and rewards) of family life, how this might vary with the age of the teacher's children, or how the situation of teachers who are parents might contrast with that of teachers who are not parents. A host of new questions can be raised concerning the ways in which different kinds of teachers and students make sense of the differences between the concrete circumstances of their lives outside and inside school.

Data Collection

Of all the aspects of fieldwork research, data collection has been the most discussed in the literature on methods. In the interest of economy of exposition, this discussion of issues in data collection is kept to a minimum. I will review major themes and issues in data collection and will refer the reader to main sources in the literature for discussion at greater length.

One approach to data collection in the field is to make it as intuitive--or as radically inductive--as possible. The conviction is that with long-term, intensive participant observation in a field setting, begun with no prior conceptual expectations that might limit the fieldworker's openness to the uniqueness of experience in the setting, an intuitive sense of relevant research questions and of conclusions regarding patterns will emerge by induction. From this point of view, fieldwork is seen as an almost mystical process, essentially unteachable. The best preparation is solid grounding in substantive courses in anthropology and/or sociology. After learning relevant substantive theory and after reviewing empirical results of fieldwork research the novice researcher proceeds to the field and does fieldwork.

Anthropologists, especially, have set forth this mystical conception of fieldwork as unteachable. It is said of Alfred Kroeber that when a doctoral student came for advice on fieldwork research methods before embarking on a study of a native American society somewhere in California, Kroeber made the following comments:

1. First, find your Indians (i.e., don't study the wrong group by mistake).
2. Pads of paper and pencils are very useful.

3. Be sure to take a frying pan, but don't loan it to anyone; you may not get it back.

This is an extremely romantic notion of fieldwork. One enters the field with no preconceptions and learns the methods by doing them (as one can learn to swim by being thrown in the pool). After tremendous emotional stress one finally induces grounded analytic categories. The likelihood of stress is increased if one experiences not only emotional trauma while in the field, but contracts an exotic, debilitating disease such as malaria. Only after returning home does one crack the code of local lifeways and solve the interactive analytic puzzle.

Another approach to data collection is to make the process as deliberative as possible. That is what is argued for here. There is no warrant, in contemporary philosophy of science and cognitive psychology, for the romantic conception of fieldwork, in which the fieldworker arrives in the setting with a *tabula rasa* mind, carrying only a toothbrush and hunting knife. One can argue that there are no pure inductions. People always bring to experience frames of interpretation, or schemata. From this point of view the task of fieldworkers is to become more and more reflectively aware of the frames of interpretation of those they observe and of their own culturally learned frames of interpretation, those they brought with them to the setting. This is to develop a distinctive view of both sides of the fence, what Bohannon (1963, pp. 7-8) has characterized as the *stereoscopic social vision* of the ethnographer.

When one considers fieldwork as a process of deliberate inquiry in a setting (cf. Pelto & Pelto, 1977; Levine, Gallimore, Weisner, & Turner, 1980) one can see the participant observer's conduct of data collection as progressive problem solving, in which issues of sampling, hypothesis generation, and hypothesis testing go hand in hand. Fieldworkers' daily presence in a setting is guided by deliberate decisions about sampling and by intuitive reactions as well. When and where these observers go, whom they talk to and watch, with whom they participate in daily activities more actively and with whom they participate with a more distanced observational stance--all these involve strategic decisions about the nature of the key research questions and working hypotheses of the study.

All research decisions are not deliberate, however. Because of this the toothbrush and hunting-knife school has a valid point in reminding us of the importance of induction, intuition, and intensive firsthand presence in the setting. From the point of view of a more deliberative conception of fieldwork, however, the central issue of method is to bring research questions and data collection into a consistent relationship, albeit an evolving one. This is possible, I argue here, without placing shackles on intuition and serendipity. Framing research questions explicitly and seeking relevant data deliberately enable and empower intuition, rather than stifle it.

In the absence of a deliberative approach to fieldwork some typical problems of inadequate evidence emerge at the stage of data analysis after leaving the field. These are problems that might have been avoided had different strategic decisions been made at the stage of data collection, when midcourse correction was still possible. There are five major types of evidentiary inadequacy.

1. Inadequate amounts of evidence. The researcher has too little evidence to warrant certain key assertions. The fieldworker's daily round did not include the scenes in which evidence could have been collected that would have confirmed the assertion.

2. Inadequate variety in kinds of evidence. The researcher fails to have evidence across a range of different kinds of sources (e.g., direct observation, interviewing, site documents) to warrant key assertions through . The researcher did not seek triangulating data while in the field.

3. Faulty interpretive status of evidence. The researcher fails to have understood the key aspects of the complexity of action or of meaning perspectives held by actors in the setting. (Participation was not long enough or intensive enough in key recurrent scenes, and/or interviewing and direct observation did not com-

plement one another, and/or the researcher was deceived by informants who lied and faked because they did not trust the researcher or did not agree with the researcher's aims.)

4. Inadequate disconfirming evidence. The researcher lacks data that might disconfirm a key assertion. Moreover, the researcher lacks evidence that a deliberate search was made for potentially disconfirming data while in the field setting. This weakens the plausibility of the absence of disconfirming evidence and leaves the researcher liable to charges of seeking only evidence that would support favorite interpretations. (The researcher, not having realized while in the field the relations between research questions and data collection, failed to identify a key assertion during fieldwork and consequently failed to search for evidence that might disconfirm the assertion or that might stand as discrepant cases, whose analysis while in the field might shed new light on the assertion and its theoretical presuppositions.)

5. Inadequate discrepant case analysis. The researcher did not scrutinize the set of disconfirming instances, examining each instance (i.e., discrepant case) and comparing it with the confirming instances to determine which features of the disconfirming case were the same or different from the analogous features of the confirming cases. Such comparative feature analysis often reveals flaws in the original assertion, which, if rewritten, can account for the discrepant cases as well as accounting for those initially thought to have been confirming instances. The remaining members of the set of disconfirming instances are genuinely discrepant cases that are not accounted for by the assertion. (Discrepant case analysis will be illustrated by classroom examples in the next major section of this paper which covers data analysis and report writing. The point to be noted here is that discrepant case analysis enables the researcher to refine and adjust major assertions and their theoretical presuppositions. If such analysis is not done two types of errors can result: (a) The researcher rejects an assertion prematurely by counting as similar all instances that seem, upon first analysis, to be disconfirming ones and/or (b) the researcher fails to refine and adjust the assertions that appeared at first analysis to be confirmed by the data.)

Issues of Site Entry and of Research Ethics

Potentially good fieldwork research can be compromised from the outset by inadequate negotiation of entry in the field setting. This leads to problems of data quality and of research ethics. The researcher's interest is in the broadest possible kinds and amounts of access. Given the potential problems of evidentiary adequacy noted above, the fieldworker wants ideally to be able to observe anywhere in the setting at any time and to be able to interview any member of the setting on any topic. This may or may not be in the best interests of those in the setting. Issues of special interest and special risk arise, not only between members of the setting and its outside constituencies (e.g., school district staff and its local community, the state education department, federal education agencies), but within and across system levels in the organization (e.g., the interests of teachers in relation to a principal, the interests of students in relation to teachers).

Two basic ethical principles apply. Those studied, especially those studied as focal research subjects, need to be (a) as informed as possible of the purposes and activities of research that will occur and of any burdens (additional work load) or risks that may be entailed for them by being studied and (b) protected as much as possible from risks. The risks involved can be minimal. Their nature is not that of physical risk, as in some medical experiments. Psychological and social risks (embarrassment and/or liability to administrative sanction) are usually the kind entailed in fieldwork research. Still, the risks of psychological and social harm can be substantial, when fieldwork is done by an institutionally naive researcher who has not adequately anticipated the range of different kinds of harm to which persons of varying social position in the setting are potentially liable.

Liability to risk is often greatest between members of differing interest groups in the local setting. Reporting to a general scientific audience usually does not expose local people to risk. Rather, it is reporting in the local setting that needs to be considered in the negotiation of access to information about individuals in the setting.

The researcher is in a perplexing situation. S/he needs to have done an ethnography of the setting in order to anticipate the range of risks and other burdens that will be involved for those studied. While it is not possible, at the outset, to anticipate all the ethical issues that will emerge, it is possible to anticipate many of them, and to negotiate about them with those interest groups in the setting whose existence and whose circumstances are apparent at the outset. In school settings, these general classes of group interest are students, teachers, parents, principals, and central administrators. Some of the differing interests of these differing classes can be identified in advance. It is usually wise, for example, to guarantee to teachers that certain kinds of information about their teaching will not be available to their immediate supervisors and to guarantee to parents that information about a student's home life will not be available to teachers. Such information about teachers and about homes, however, might not expose individuals to risk if reported in the aggregate--all or many teachers, all or many homes.

In special local circumstances the usual risks attendant to a given institutional position may not exist. For example, the information that a teacher does not use the basal reader as directed by the system-wide mandates for the reading program might count against the teacher in one principal's eyes, while for another principal with another point of view, that same information would count in the teacher's favor.

The researcher is wise to negotiate strict protection of information at the outset of a study. When special circumstances warrant, these agreements can be changed to be more flexible later in the research process. Usually, however, it is more difficult to restrict access of higher-ups in the system to certain kinds of information later in the research process.

The basic ethical principle is to protect the particular interests of especially vulnerable participants in the setting. Focal subjects are especially vulnerable, as are those who are single occupants of an institutional status (e.g., there is only one principal; there are many teachers, but only one kindergarten teacher). People who are not focal in a study may be less at risk. (For example, if one is studying low-achieving students who are girls, high-achieving boys in the room are less likely to be at risk. They would appear in descriptive reports as part of the background, not in the foreground of the report.)

In a study I directed in a large urban school system, for example (Cazden, Carrasco, Maldonado-Guzman, & Erickson, 1980), we were conducting a full year's participant observation and videotaping with Hispanic, bilingual teachers who were not fully certified. The teachers did not have tenure and were on annually renewable contracts. In that instance we negotiated an agreement with the building principal, the district superintendent, and an associate superintendent in the central office that not only would the researchers never be asked to show their field notes to an administrator, but that no administrator would ask the researchers for oral characterizations of the teachers being studied or for access to the videotapes for any purposes of evaluation. The researchers anticipated showing some videotape footage to the principal and the faculty in staff meetings, but planned to do this in a second year, after data had been collected, and after the teachers had reviewed the videotape footage to be shown and had given consent that others see the footage. In any event, no footage would ever be shown anyone but the research staff without the teachers' consent. In addition, however, we had negotiated written agreement with administrators that they would not even ask to see teacher-cleared footage until after the next annual contract had been signed by the teachers. This did not totally eliminate risk to the teachers, but it minimized the risk of informal coercion while the teachers were being studied. As it happened, no requests for information or tape viewing were made by administrators during the year, but it was prudent to have anticipated this in negotiating entry.

The researcher is wise to take great care in being explicit about uses of information and access to it, because it is in the researcher's interest to have as much access in the setting as is possible under conditions of high trust and rapport. Access in itself is of no use to the researcher without the opportunity to develop trust and rapport. The very process of explicit entry negotiation with all categories of persons likely to be affected by the research can create the conditions of trust that are necessary. In consequence, one can see that ethical responsibility and scientific adequacy must go hand in hand in fieldwork research. If research subjects consent freely to be studied and if they do so having been informed of the purposes of research and the possible risks to them, as well as the possible benefits, then deception and faking are minimized, as is passive resistance to the researcher's presence.

In sum, negotiation of entry is a complex process. It begins with the first letter or telephone call to the site. It continues throughout the course of research, and continues after the researcher has left the site, during later data analysis and reporting. Careful negotiation of entry that enables research access under conditions that are fair both to the research subjects and to the researcher establishes the grounds for building rapport and trust. Without such grounds mutual trust becomes problematic and this compromises the researcher's capacity to identify and analyze the meaning perspectives of those in the setting. There is considerable discussion of entry negotiation in the literature of fieldwork research methods. See especially Agar (1980, pp. 42-62), Bogdan and Biklen (1982, pp. 120-125), Schatzman and Strauss (1974, pp. 18-33), and Wax (1971, pp. 15-20, 84-93, 143-174).

Developing a Collaborative Relationship with Focal Informants

Trust and rapport in fieldwork are not simply a matter of niceness; a noncoercive, mutually rewarding relationship with key informants is essential if the researcher is to gain valid insights into the informant's point of view. Since gaining a sense of the perspective of the informant is crucial to the success of the research enterprise, it is necessary to establish trust and to maintain it throughout the course of the study.

One source of difficulty with trust is the tendency for informants to assume, whatever the researcher's presentation of the research's purposes was during the initial stages of negotiation of entry, that the researcher's purposes are in some way evaluative. It is often necessary to reinterpret the purposes of research a number of times to the same informant. In addition, it is necessary to explain the purposes of the study to each new informant one meets. If the new informant is not a potential key informant, a brief recounting of the study's purposes may suffice, but it is often wise to give each new informant one meets a full explanation of the study's purposes because one cannot anticipate fully at the outset which informants will become key later in the study. It is useful for the researcher to have virtually memorized a brief statement of the study's purposes, the procedures that will take place, and the steps taken to maximize confidentiality and minimize risk. If material cannot be kept confidential the informant(s) need to know that. If the researcher will be present in a given scene in the role of participant observer, the informants need to know that in that scene their actions and comments are "on the record," even if the researcher is not writing notes or making a recording. If informants wish actions to remain off the record they need to understand clearly that it is up to them to request that of the participant observer.

Informants' concerns about the observer's evaluative perspective make great sense, given the ubiquity of observation for evaluative purposes in schools. In an ultimate sense, the researcher's purposes are indeed evaluative, for to portray people's actions in narrative reports is to theorize about the organization of those actions, and evaluation is inherent in any theory. I will return to this point in the next section of this paper.

The researcher can expect that informants will test the assurances of confidentiality, nonjudgmental perspective, and other ethical considerations that were negotiated by the researcher. This testing usually happens early in the relationship with a new informant. The informant may ask for an evaluative comment or may reveal some harmless piece of information to the researcher and then check the organization's rumor network to see if the researcher revealed the item of information to anyone else in the setting.

When doing team research it is very important for all members of the research team to adhere strictly to a basic ground rule: Never make comments to other team members about anything observed in the site while you are at the site. Side conversations between research team members on site can be overheard by participants in the site, sometimes with disastrous consequences for the credibility of the research team.

An excellent way to establish and maintain trust in a setting is to involve the informants directly in the research, as collaborators with the researcher(s). Some issues of trust come up at the outset of attempts by the researchers to develop a partnership in research with key informants. The informants may perceive such attempts by researchers as manipulative, since the self-perception of classroom teachers, especially, is that they are not experts; if anyone is the expert in a partnership between researchers and classroom teachers, the teachers may assume that it is the researchers who are the experts. This perception on the part of teachers may persist despite disclaimers by the researchers. In time, however, a genuine partnership can develop, in which the teacher and the researcher begin to frame research questions jointly and to collect data jointly. (On the process of collaborative fieldwork research on teaching, see Florio & Walsh, 1980.)

In developing initial rapport, as well as in establishing a collaborative relationship with key informants, it is necessary that the researcher have a clear idea of the major research questions guiding the inquiry and the likely data collection procedures that will be used to pursue the lines of inquiry suggested by the study's guiding questions. This presupposes the deliberative conception of the fieldwork research process that was alluded to earlier in this discussion.

Data Collection as an Inquiry Process

Inquiry begins in the field with the research questions that guide the study. Three issues are crucial at the outset: (a) identifying the full range of variation in modes of formal and informal social organization (role relationships) and meaning perspectives; (b) collecting recurrent instances of events across a wide range of events in the setting so that the typicality or atypicality of certain event types with their attendant characteristic social organization can later be established; and (c) looking at events occurring at any system level (e.g., the classroom, the school, the reading group) in the context of events occurring at the next higher and next lower system levels. This means that if one were observing reading groups because a guiding research question led one to focus on issues in the teaching of reading, one would look at least at constituent events within the reading group event (sets of topically connected turns at speaking, teacher moves, student moves) and at events at the classroom level--for example, formal and informal status hierarchies of students in the classroom as a whole, characteristic ways the teacher has of organizing interaction with students in events other than reading. Ideally, one would wish to look at an even wider range of system levels for possible connections of influence--for example, building-level influences, exerted by other teachers and by the principal, that might affect the teacher's teaching and influences from children's lives outside school in their homes and in other community settings that might influence their actions in the reading group. In fieldwork one never considers a single system level in isolation from other levels; that is a basic feature of the sociocultural theory from which participant observational methods derive.

In order to determine the full range of variation in social organizational arrangements, meaning-perspectives, and connections of influence within and across system levels in the setting and its surrounding environments, it is necessary to begin observation and interviewing in the most comprehensive fashion possible. Later in the research process one moves in successive stages to more restricted observational focus.

The progressive problem solving of fieldwork entails a process of sequential sampling. Because of the wide-angle view taken at the outset, it can be seen as "observing without any preconceptions," but that is a misleading characterization. Preconceptions and guiding questions are present from the outset, but the researcher does not presume at the outset to know where, specifically, the initial questions might lead next. In consequence the researcher begins with the most comprehensive possible survey of the setting and its surrounding environments. Concretely, that means that the researcher plans deliberately to spend time in particular places at particular times.

For example, in studying a classroom, one would first begin by seeking an overall sense of the neighborhood school community by collecting written information on the school community (e.g., census data), walking and driving around the community, and stopping in local shops. One would then enter the classroom, observing for complete days, from before the students arrive until they leave at the end of the day.

Having identified the full range of events that occurred in the day and having, through repeated observation, begun to establish the relative frequency of occurrence of the various event types, the researcher can begin to focus on those events that are of central interest in the study. The researcher would begin to restrict the range of times and places at which observation occurred. Periodically, however, the researcher would want to return to more comprehensive sampling in order to restore breadth of perspective and to collect more instances of events across the full range of events that occurred in the setting. This provides additional warrant for claims the researcher might later want to make regarding the typicality and atypicality (high and low frequency) of certain event types or of certain role relationships within an event or range of events.

As the researcher focuses on a more restrictive range of events within the setting, the researcher also begins to look for possible connections of influence between the setting and its surrounding environments. Unlike standard community ethnography, in which one begins with the whole community as the unit of analysis and moves progressively to investigate subunits within the community, in educational fieldwork one usually moves relatively quickly, after a brief general survey of the community, to continuous, focused study of a given educational setting (e.g., the classroom, the math lesson).

After considerable study of the focal setting the researcher moves out again to investigate to its surrounding environments. The analytic task is to follow lines of influence out the classroom door into the surrounding environments. Cues to these lines of influence are found in site documents (e.g., memos enjoining certain actions within the classroom) and in comments of members in the setting (e.g., teachers, students) about those aspects of their lives outside the immediate setting that influence what takes place there. Informants are usually not fully aware consciously of the full range and depth of these influences, which include culturally learned and taken for granted assumptions about proper conduct of social relations, content of subject matter, human nature, and attitudes that shape one's definitions of what *work*, *play*, *trustworthiness*, *academic ability*, and the like might look like when encountered in everyday life in the classroom.

With time, the fieldworker's notions of the phenomena that are most relevant to the study become clearer and clearer. In the final stages of fieldwork research, the focus may be very restricted indeed, as research questions and working hypotheses become more and more specific. The process of fieldwork research as deliberate inquiry has been described by some anthropologists (e.g., Agar, 1980; Dobbert, 1982; Dorr-Bremme, 1984; Goetz & LeCompte, 1984; Levine, et al., 1980; Pelto & Pelto, 1977) and by numerous sociologists (e.g., Glaser & Strauss, 1979; Lofland, 1976; Schatzman & Strauss, 1974). This process has been described for studies of teaching by Erickson (1973, 1977) and Mehan (1979), among others. Limits of space preclude full discussion here. Some elaboration on the nature of the inquiry process itself, however, is appropriate.

The Boundedly Rational Process of Problem Solving in Fieldwork

In fieldwork the researcher is attempting to come to understand events whose structure is too complex to be apprehended all at once, given the limits on human information processing capacity. These limits--what Simon (1957) calls *bounded rationality*--are compensated for in participant observation by spending time in the field setting.

The participant observer, present in particular spaces and times in the field setting, waits for particular types of recurrent events to keep happening (e.g., disputes over land tenure, deaths, births, preparing the main meal of the day, seeing the next client at the unemployment office, having a reading lesson, exchanging turns at reading aloud, being corrected for an error in reading aloud, handing in a written exercise). The researcher may seek out particular sites within a field setting where a particular type of event is most likely to happen. This gives the participant observer a situation analogous to that of the subject in a learning experiment--the opportunity to have multiple trials at mastering a recurringly presented task. In this case the task is that of learning how to observe analytically a particular type of event and how to make records (field notes, audio and video recordings) of the actions that occur in the events for more careful study later.

Across each trial at observing a recurrent event, the participant observer can alter slightly the focus of analytic attention, each time attending to some features of what is occurring and not attending to others. The observer can also vary the focus of attention in rereading field notes taken during the event and in writing these up in expanded form after the day's observation has been completed. A fundamental principle is that this subsequent reflection and write-up, which usually takes at least as long as the time spent initially in observation, needs to be completed before returning to the field setting to do further observation. This means that the researcher needs to anticipate spending time writing up notes--a full day's observation in a classroom would need to be followed by a full day's (or night's) period of write-up. Write-up stimulates recall and enables the researcher to add information to that contained in the unelaborated, raw notes. Write-up also stimulates analytic induction and reflection on relevant theory and bodies of research literature. There is no substitute for the reflection during fieldwork that comes from time spent with the original field notes, writing them up in a more complete form, with analytic insights recorded in them.

In spite of the limits on information-processing capacity, time over time observation and reflection enable the observer to develop an interpretive model of the organization of the events observed. These models are progressively constructed across a series of partial observations in a process that is analogous to a learning experiment in which the learner is presented with a series of trials.

Two sets of procedural decisions by the fieldworker have special importance for correcting what is traditionally thought of as *bias* in sampling and observation--(a) the decisions the observer makes about where to be in space and in time in the field setting and (b) the decisions the observer makes about the foci of attention in any one occasion of observation. The former decisions affect the overall sampling of events that the participant observer makes. The latter decisions affect the completeness and analytic adequacy of observations made cumulatively across a set of trials.

A major strength of participant observation is the opportunity to learn through active participation--one can test one's theory of the organization of an event by trying out various kinds of participation in it. A major limitation in fieldwork is the partialness of the view of any single event. There is, in consequence, a tendency toward bias in sampling that favors the frequently occurring event types since those are the ones one comes to understand most fully across time.

I will discuss the consequences of this bias in the next section of the paper. There is also another sense in which a bias toward the typical is present in fieldwork research. Given the limits on what can be attended to during any one observational trial, the observer may come to be dominated early on by a focus on an emerging theory of organization that is being induced. As that happens, the fieldworker may attend, while observing, mainly to those aspects of action that confirm the induced theory, overlooking other aspects of action that might be noted as data according to which the emergent theory might be disconfirmed. Thus potentially disconfirming evidence is less likely to be recorded in the field notes than is the potentially confirming evidence.

The researcher's tendency to leap to conclusions inductively early in the research process can be called the *problem of premature typification*. This problem makes it necessary to conduct (both while in the field and in subsequent reflection after leaving the field) deliberate searches for disconfirming evidence in the form of discrepant cases--instances of the phenomena of interest whose organization does not fit the terms of one's emerging theory. (On the importance of discrepant case analysis, see Mehan, 1979, and the classic statement of Lindesmith, 1947.)

Another way to reduce the bias of premature typification and the bias toward emphasis on analysis of recurrent events at the expense of analysis of rare events is to include machine recording in the research process. Audio or audiovisual records of frequent and rare events in the setting and in its surrounding environments provide the researcher with the opportunity to revisit events vicariously through playback at later times. Recording of naturally occurring interaction in events does not substitute for firsthand participant observation and recording by means of fieldnotes. Still, such recordings, subjected to systematic analysis, can provide a valuable additional data source in fieldwork research. It is appropriate to discuss briefly the special nature of machine recording and analysis in the process of fieldwork research. The discussion will anticipate slightly that to be covered in the next section on data analysis, but it is appropriate here to highlight contrasts with the kinds of progressive problem solving that are possible during firsthand participant observation in the field setting. The use of machine recording as a primary data resource in fieldwork research has been called "microethnography" by Erickson (1975, 1976, 1982a), "constitutive ethnography" by Mehan (1979), and "sociolinguistic microanalysis" by Gumperz (1982). The microethnographic research process has been described in detail by Erickson (1982a), by Erickson and Shultz (1977/1981), and by Erickson and Wilson (1982).

Machine recording and analysis differ from participant observation in one crucial respect. Unlike the participant observer, the analyst of audiovisual or audio documentary records does not wait in the setting for instances of a particular event type to occur. In reviewing the machine-recorded documentary evidence, the analyst is freed from the limits of the participant observer's embedding in the sequential occurrence of events in real time and space. The researcher indexes the whole recorded data corpus, identifying all the major named events recorded (e.g., lessons, meetings, recess periods, parent-teacher conferences) and identifying as well the presence in certain events of key informants. Then the researcher searches back and forth through the entire recorded corpus for instances of frequent and rare events, moving as it were back and forth through time and space to identify analogous instances. This is analogous to the initial survey of the setting and its surrounding environments that the participant observer does by making choices of where to be in time and space in the setting. Then the researcher identifies a particular set of instances from the recorded data corpus that are of special interest. The researcher at this point is able to revisit this set of instances vicariously by replaying them. The capacity to revisit the same event vicariously for repeated observations is the chief innovation made possible by the use of machine recordings in fieldwork research. The innovation has distinctive strengths and limitations.

The first strength is the *capacity for completeness of analysis*. Because of the (theoretically) unlimited opportunity for revisiting the recorded instance by replaying it, the instance can be observed from a variety of attentional foci and analytic perspectives. This enables a much more thorough description than those that can be prepared by a participant observer from field notes.

A second strength is the *potential to reduce the dependence of the observer on primitive analytic typification*. Because the instance can be replayed, the observer has opportunity for deliberation. S/he can hold in abeyance interpretive judgments of the functions (meanings) of the actions observed. Often in participant observation these interpretive inferences can be faulty, especially at the early stages of fieldwork.

In microethnographic analysis of a film or videotape the opportunity to look and listen more than once relieves the observer's tendency to leap too soon to analytic induction. This independence from the limits of real time in observation produces a profound qualitative difference in the conduct of inquiry. That difference is analogous to the contrast between spoken and written discourse, the latter being amenable to revision and to much more detailed planning than the former (on this contrast, see Goody, 1977; Ong, 1977).

A third strength of the analysis of machine recordings is that it *reduces the dependence of the observer on frequently occurring events as the best sources of data*. For the analyst of a machine recording, especially an audiovisual one, the rare event can be studied quite thoroughly through repeated reviewing. That opportunity is not available to the participant observer in dealing with rare events.

There are two main limitations in the use of machine records as a primary data source. The most fundamental limitation is that in replaying a tape the analyst can only interact with it vicariously. Thus the vicarious experience of an event that is microethnography's greatest strength is also its greatest weakness. The researcher has no opportunity to test emerging theories by trying them out as an active participant in the scenes being observed. That opportunity is one of the hallmarks of participant observation.

Another limitation in using machine recordings as a primary data source is that in order to make sense of the recorded material the analyst usually needs to have access to contextual information that is not available on the recording itself. The recorded event is embedded in a variety of contexts--in the life histories and social networks of the participants in the events and in the broader societal circumstances of the events, including the relevance of ethnic, social class, and cultural group membership of the participants for the ways in which they organize their conduct together in the recorded event. Knowing the ways in which the event that occurs face to face fits into the web of influences within the setting and between the setting and its wider environments (including the total society in which the setting resides) can be crucially important in helping the researcher to come to an interpretive understanding of the immediately local organization of interaction within the event, or to an interpretive understanding of the significance of the event's having happened in a particular way rather than some other possible way.

Sometimes the broader contexts around an event may not have much influence on the conduct of social relations face to face within the event. In such cases, an analysis is not invalidated by the absence of broader ethnographic framing. But when the influence of the wider world is strong on the immediate scenes of face to face interaction in the classroom, and when those influences place systematic constraints on the conduct of relations in the classroom, then the absence of broader contextual framing from general ethnographic fieldwork can invalidate the analysis.

Both limitations of microethnography--the absence of participation as a means of learning and the absence of contextual information beyond the frame of the recording--can be overcome by combining regular ethnography with microethnography.

Data Analysis and Reporting

Writing the report

There are nine main elements of a report of fieldwork research:

1. empirical assertions,
2. analytic narrative vignettes,
3. quotes from fieldnotes,
4. quotes from interviews,
5. synoptic data reports (e.g., maps, frequency tables, figures),
6. interpretive commentary framing particular description,
7. interpretive commentary framing general description,

8. theoretical discussion, and

9. report of the natural history of inquiry in the study.

Each of these elements will be discussed in turn. Separately and together they allow a reader to do three things: (1) to experience vicariously the setting that is described and to confront instances of key assertions and analytic constructs, (2) to survey the full range of evidence on which the author's interpretive analysis is based, and (3) to consider the theoretical and personal grounds of the author's perspective as it changed during the course of the study. Access to all these elements allows the reader to function as a coanalyst of the case reported. The absence of any one of the elements, or inadequacy in any of them, limits the reader's ability to understand the case and to judge the validity of the author's interpretive analysis.

Generating and testing assertions. A report of fieldwork research contains empirical assertions that vary in scope and in level of inference. One basic task of data analysis is to generate these assertions, largely through induction. This is done by searching the data corpus--reviewing the full set of field notes, interview notes or audiotapes, site documents, and audiovisual recordings. Another basic task is to establish an evidentiary warrant for the assertions one wishes to make. This is done by reviewing the data corpus repeatedly to test the validity of the assertions that were generated, seeking disconfirming evidence as well as confirming evidence.

Here are some examples of the kinds of assertions that a fieldwork research report might include:

1. There are two major groups of children in the classroom, from the teacher's and the students' points of view: good readers and bad readers.
2. Usually, good readers receive higher-order skills emphasis in reading instruction (i.e., emphasis on comprehension) while bad readers receive lower order skills emphasis in

reading instruction (emphasis on decoding).

3. There are two main subgroups of bad readers: those who try and those who don't try.

4. Not trying, from this particular teacher's point of view, consists in lack of persistence in small-group reading lessons and in lack of accuracy in doing reading seatwork. Not trying does not consist in not completing seatwork or in talking with other students during periods of seatwork. Such behavior is not conceived of by the teacher as not trying. Nor does making an occasional error in seatwork count as not trying. What counts as not trying in seatwork behavior is frequent small errors--frequent in each day's work and from day to day.

5. The two subgroups of bad readers receive the same kind of reading instruction, but those who try get some of the same privileges that good readers get (e.g., a wider choice of books to read, taking a message to the office, an interesting assignment).

6. Bad readers who don't try are usually treated differently by classmates from bad readers who do try. Bad readers who don't try are often not chosen by classmates to play a game or to trade food with at lunch time, while bad readers who do try are chosen for these relationships by their good reading classmates as often as the good readers choose fellow good readers.

7. Two exceptions to the pattern described in Assertion 6 are two boys who are physically adept and skilled in sports. These boys, both bad readers who do not try, are chosen often by other boys for sports teams on the playground.

8. With the bad readers who don't try the teacher has a regressive social relationship, that is, in almost every face-to-face encounter with the teacher, regardless of the subject matter, and in nonacademic activities as well, the teacher reacts to these children negatively in some way, and the children act inappropriately in some way. There is one exception to this. That child is a girl who comes from what the teacher considers to be a very disorganized family. The teacher suspects child abuse in this family but has not yet reported this to the principal.

These assertions about major lines of division in the class in *social identity* (status) and *role* (rights and obligations in relation to others) vary in scope and in level of inference. The assertion that two major categories of students exist, good readers and bad readers, is broad in scope but relatively low in level of inference. The assertion about what, from this teacher's point of view, counts as a bad reader who doesn't try is relatively narrow in scope and low in inferential level. The assertion that the teacher's relationship with the bad readers who don't try is regressive is both broad in scope and high in inferential level, since the assertion covers all sorts of encounters with the teacher that occur across the school day and involves the inference that both parties are contributing to the trouble they are in.

Assertions such as these are generated during the course of fieldwork, as noted in the previous section of this paper. After the researcher has left the field site, such assertions are tested and retested against the data base: the corpus of fieldnotes, interview protocols, site documents (in this case including samples of students' written work), and perhaps audiotapes or videotapes of naturally occurring classroom events.

To test the evidentiary warrant for an assertion the researcher conducts a systematic search of the entire data corpus, looking for disconfirming and confirming evidence, keeping in mind the need to reframe the assertions as the analysis proceeds. For example, in testing Assertion 2 above, concerning the different kinds of reading instruction given to those students the teacher considers to be good readers and bad readers, the researcher would first search the data corpus for all instances of formal reading instruction. If the students were divided into different groups by skill level, all instances of formal reading instruction in those groups would be examined to see whether the teacher's emphasis was on higher-order or lower-order skills. Any discrepant cases, that is, higher-order skills instruction given to a low-performance reading group or lower order instruction given to a high-performance group, would be identified. If the discrepant cases outnumbered those that fitted the assertion, the assertion would not be warranted by the data. Even if most of the cases fitted the assertion, the discrepant instances would be noted for subsequent analysis. After reviewing the behavioral evidence, the researcher might also review other kinds of evidence. If the teacher had commented on formal reading instruction in interviews, the interview transcripts or audiotapes would be reviewed to see what they might reveal about the teacher's beliefs about the kinds of reading instruction that were appropriate for children at different skill levels.

The fourth assertion was that the teacher distinguished between two types of bad readers, those who try and those who don't try. To test this assertion and to discover the attributes that distinguish individuals in the two categories, interview data would be reviewed first. Did the teacher mention this distinction, in so many words, in formal interviews? What about in informal comments made to the researcher during transitions between classroom activities? Review of the fieldnotes would reveal this. The fieldnotes might also show if the teacher invoked the distinction in addressing students in the classroom (e.g., "John, you're just not trying") or in writing a comment on a student's paper. The researcher would search the fieldnotes, videotapes, and samples of student written work for any instance of such action by the teacher. In addition the researcher would look for more subtle indicators of the teacher's perspective on *trying* and on *who trys*: tone of voice and facial expression in addressing those who don't try, amounts of time given to complete the work or to comply with a directive to close the book and line up for recess. Did the teacher, finally, not hold a *not-trying* student accountable for completing a task or for not only finishing it, but doing it well?

Traces of evidence for these issues and questions would appear in the field notes. It should be emphasized that these are indeed traces--fragments that must be pieced together into mosaic representations that are inherently incomplete. Conclusive proof is often not possible, especially from data derived from fieldnotes. Yet some lines of interpretation can be shown to be more robust than others. On that admittedly shaky ground must rest the possibility of intellectual integrity and credibility in interpretive research.

Assertion 5 claims that all bad readers receive the same kind of formal reading instruction, but that those who try receive a different kind of informal reading instruction (a wider choice of books to read during free time, an interesting writing assignment). The fifth assertion also claims that bad readers who try also receive other privileges, such as taking a note to the office, leading a song, collecting student papers, while bad readers who do not try do not receive these privileges.

To test the warrant for these claims, the researcher would look in the data corpus beyond the instances of formal reading instruction. Here the unit of analysis might be mention of individuals in the fieldnotes. The researcher might identify the full set of individuals who are bad readers who don't try and the full set of those who do try and search the fieldnotes for instances of description of what those children were doing. Then the researcher would compare what the notes reported for the two sets of bad readers--what their differences were in privileges, in access to activities that were positively valued by children in the room. Notice that the general concept of *privileges* would have to be specified in terms of local meanings that were distinctive to that classroom. There would need to be descriptive evidence in the fieldnotes, or in interviews with children, that such activities as taking a note to the office or collecting student papers were indeed valued positively. Descriptive evidence for this might consist of a number of instances reported in the fieldnotes in which many students volunteered for such activities or expressed disappointment that they were not chosen. The researcher continues to assume that local meanings and values are not self-evident in the data nor can they be assumed to generalize from one room to the next. It may be true that most grade school age children in America like to collect papers. That might not be true in this particular classroom, however, for some locally distinctive reasons.

As the data corpus is searched the researcher continually looks for disconfirming evidence. Are there any instances in which a bad reader who doesn't try receives privileges that are similar to those received by bad readers who do try? These discrepant cases are noted. After the general search is completed the researcher returns to the discrepant cases for closer investigation.

The results of such an investigation are reported in Assertion 7, concerning the ways that students treat the bad readers who don't try. The general pattern was reported in Assertion 6; bad readers who don't try are usually treated negatively by their peers. Two students are treated positively, however, in special circumstances. These are athletically adept boys, who are chosen for team sports on the playground. Evidence for this assertion would come from the discrepant case analysis. There might have been many instances of these two boys being chosen. The circumstances would be limited to team sports on the playground, however, and the positive reaction of peers is easily explained in terms of the interests of building a winning team.

Another example of a finding from discrepant case analysis is seen in Assertion 8, concerning the one bad reader who doesn't try, with whom the teacher does not have a regressive relationship. The explanation for this case involves higher levels of inference than does the explanation for the athletically adept boys being chosen by their peers. Why would this girl be treated differently from the other bad readers who don't try? The answer lies not in a causal analysis--in a mechanical sense of causation--but in an exploration of the teacher's perspective. What does this child mean to the teacher? How does that differ from what other bad readers who don't try mean to the teacher?

Various comparison cases can be identified. The researcher might consider all the other girls in the set *bad readers who don't try*, to see what the child's gender status might mean to the teacher. The researcher might consider all the other children, boys and girls, for whom child abuse is suspected. If there were another bad reader who doesn't try who may be abused at home, that would be an appropriate comparison case. If that child were also a girl and did not receive special privileges, that would form the ideal contrast set. In that case the researcher might ask, "What else might explain this?" Further investigation of the fieldnotes, teacher interviews, and videotapes might reveal that there are differences in general classroom demeanor between the two children--the one who does not receive special privileges is less polite than the other, or less funny, or less sad looking.

The preceding discussion illustrates the kind of analytic detective work by which the researcher discovers the subtle shadings of distinctions in social organization and meaning-perspective according to which classroom life is organized as a learning environment for the children and for the teacher. Discrepant cases are especially useful in illuminating these locally distinctive subtleties. A deliberate search for disconfirming evidence is essential to the process of inquiry, as is the deliberate framing of assertions to be tested against the data corpus. This is classic analysis, termed analytic induction in the literature on fieldwork methods. Much of this induction takes place during fieldwork, but much of it remains to be discovered after leaving the field. A good rule of thumb is to plan to spend at least as much time in analysis and write-up after fieldwork as one spent in collecting evidence during fieldwork.

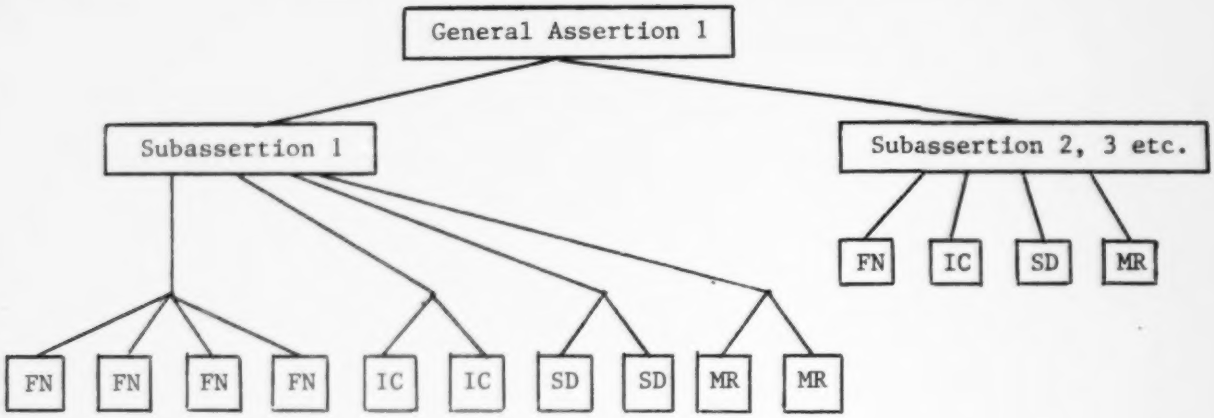
In reviewing the fieldnotes and other data sources to generate and test assertions, the researcher is looking for *key linkages* among various items of data. A key linkage is key in that it is of central significance for the major assertions the researcher wants to make. The key linkage is linking in that it connects many items of data as analogous instances of the same phenomenon. To have said, for example, that the teacher distinguishes between good readers and bad readers is to link all occurrences in the total data set in which the teacher treated bad readers differently from good readers, in reading instruction and in any other classroom activities. The distinction between bad and good readers is key because many instances of one kind of treatment by the teacher toward the bad readers and another kind of treatment toward the good readers can be linked together in the review of the fieldnotes. Instances from interviews can also be linked, in relation to this distinction, together with instances of teacher-student interaction from the fieldnotes.

In searching for key linkages the researcher is looking for patterns of generalization within the case at hand, rather than for generalization from one case or setting to another. Generalization within the case occurs at different levels, which differ in the scope of applicability of the generalization. In the earlier example the distinction between good and bad readers generalized most broadly for formal reading instruction. This means that upon review of the data corpus it was apparent that there were no instances of higher-order formal instruction given to bad readers and no instances of lower-order formal instruction given to good readers. For informal instruction, however, the broadest generalization does not hold. A subsidiary distinction must be made to account for the patterns in the data; the distinction between bad readers who try and those who don't try.

The fieldworker found upon review of all instances of informal reading instruction (this set included certain kinds of writing assignments and privileges for choosing books for free reading) that the bad readers who tried were treated the same as good readers, while the bad readers who didn't try were treated differently from both the good readers and the bad readers who tried, Moreover, that pattern of differential treatment generalized beyond informal reading instruction to many other instances of interaction between the teacher and the bad readers who didn't try, with some notable exceptions. But the exceptions were a minority of instances, and they applied to a limited subset of the bad readers who didn't try.

An appropriate metaphor for this kind of pattern discovery and testing is to think of the entire data set (fieldnotes, interviews, site documents, videotapes) as a large cardboard box, filled with pieces of paper on which appear items of data. The key linkage is an analytic construct that ties strings to these various items of data. Up and down a hierarchy of general and subsidiary linkages, some of the strings attach to other strings. The task of pattern analysis is to discover and test those linkages that make the largest possible number of connections to items of data in the corpus. When one pulls on the top string, one wants as many subsidiary strings as possible to be attached to data. The strongest assertions are those that have the most strings attached to them, across the widest possible range of sources and kinds of data. If an assertion is warranted not only by many instances of items of data from the fieldnotes, but by items from interviews and from site documents, one can be more confident of that assertion than one would be of an assertion that was warranted by only one data source or kind, regardless of how many instances of that kind of data one could link together analytically. The notion of key linkage is illustrated in Figure 1.

It should be noted that this kind of analysis requires a substantial number of analogous instances for comparison. Rare events are not handled well by the method of analytic induction. In consequence, there is a bias toward the typical in fieldwork research, at the stage of data analysis after one has left the field setting--a bias that is analogous to that discussed in the previous section, that at the stage of progressive problem solving during data collection. It is important to remember that in this approach to research, frequently occurring events can come to be understood better than can rare events. Audiovisual recording of rare events can reduce this problem somewhat, since the recording permits vicarious "revisiting," but even this



FN = Field note excerpt

IC = Interview comment

SD = Document (e.g., memo, poster)

MR = Machine recording (e.g., audiotape, videotape)

Figure 1. Key linkages between data and assertions

does not entirely eliminate the problem. In judging the validity of a researcher's analysis, then, it is important to keep in mind how much of the author's argument hangs upon the interpretive analysis of rare events. The best case for validity, it would seem, rests with assertions that account for patterns found across both frequent and rare events.

In conducting such analysis and reporting it, the researcher's aim is not proof, in a causal sense, but the demonstration of plausibility, which, as Campbell argues (1978) is the appropriate aim for most social research. The aim is to persuade the audience that an adequate evidentiary warrant exists for the assertions made, that patterns of generalization within the data set are indeed as the researcher claims they are.

Much fieldwork research can be faulted on this point. The analysis may be correct. It may even be believable on intuitive grounds, in the sense that one can say, "This rings true" after reading the report. If systematic evidence to warrant the assertions is not presented, however, the researcher is justly open to criticism of the analysis as merely anecdotal. Such criticism can be refuted by conducting the kind of systematic data analysis described here and by reporting the evidence for the assertions in the ways that will be discussed in the sections to come.

It should be clear from this discussion that the corpus of materials collected in the field are not data themselves, but resources for data. Fieldnotes, videotapes, and site documents are not data. Even interview transcripts are not data. All these are documentary materials from which data must be constructed through some formal means of analysis. I will conclude the discussion of data analysis by describing the means by which the data resources are converted into items of data.

The process of converting documentary resources into data begins with multiple readings of the entire set of fieldnotes. Then the researcher may find it useful to make one or two photocopied sets of the whole corpus of fieldnotes. These copies can be used in the kinds of data searches described above. Analogous instances of phenomena of interest can be circled in colored ink. These may be instances of a whole event (e.g., a reading lesson), or of a constituent episode or phase within an event (e.g., the start-up phase of the reading lesson), or of a transaction between focal individuals (e.g., a reprimand by the teacher to a bad reader who doesn't try). A number of searches through the notes can be made in this fashion to identify evidence for or against the major assertions the researcher wishes to make, circling instances in different colors of ink, depending on the assertion the instance relates to. At this point some researchers cut up a second copy of the fieldnotes and tape the various instances to large file cards, which then can be sorted further as the analysis proceeds.

One can easily envision the use of microcomputers at this stage or at earlier stages in the review of fieldnotes. As of this writing the use of microcomputers in this kind of data analysis is just beginning, and there seem to be no major discussions of this in the literature. It would seem wise, however, to use the computer for retrieval tasks later in the search process rather than at the outset. Reading through the actual notes page by page provides the researcher with a more holistic conception of the content of the fieldnotes than that which would be possible with the more partial view provided by computerized data retrieval. Reading the notes "by hand" provides more opportunity to encounter unexpected disconfirming evidence and to discover unanticipated side issues that can be pursued in subsequent readings.

To conclude, the basic units of analysis in the process of analytic induction are instances of action in events that take place between persons with particular statuses in the scene and instances of comments on the significance of these commonplace actions and on broader aspects of meaning and belief from the perspectives of the various actors involved in the events. The instances of actions are derived from review of the fieldnotes and from review of machine recordings. The instances of comments are derived from analysis of formal and informal interviews with informants.

The basic units in the process of data analysis are also the basic elements of the written report of the study. Instances of social action are reported as narrative vignettes or as direct quotes from the fieldnotes. Instances of interview comments are quoted in interpretive commentary that accompanies the portions of analytic narrative that are presented. Reporting these details can be called *particular description*. This is the essential core of a report of fieldwork research. Without particular description to instance and warrant one's key assertions, the reader must take the author's assertions on faith. Particular description is supported by more synoptic surveys of patterns in the basic units of analysis. This can be termed *general description*. A third major type of content in a report of fieldwork research is *interpretive commentary*. Such commentary is interpolated between particular and general description to help the reader make connections between the details that are being reported and the more abstract argument being made in the set of key assertions that are reported.

The researcher has two main aims in writing the report: to make clear to the reader what is meant by the various assertions and to display the evidentiary warrant for the assertions. The aim of clarification is achieved by instantiation in particular description. Analytic narrative vignettes and direct quotes from interviews make clear the particulars of the patterns of social organization and meaning perspective that are contained in the assertions. The aim of providing evidentiary warrant for the assertions is achieved by reporting both particular description and general description. A single narrative vignette or a quote from an interview provides documentary evidence that what the assertion claimed to have happened did occur at least once. General description accompanying the more particular description provides evidence for the relative frequency of occurrence of a given phenomenon. General description is also used to display the breadth of evidence that warrants an assertion--the range of different kinds of evidence that speak to that assertion.

In the next sections I turn to consider the major types of content in a report of fieldwork research. Particular description is discussed first, then general description, and then the interpretive commentary that accompanies the presentation of descriptive evidence.

Particular description: Analytic narrative and quotes. Analytic narrative is the foundation of an effective report of fieldwork research. The narrative vignette is a vivid portrayal of the conduct of an event of everyday life in which the sights and sounds of what was being said and done are described in the natural sequence of their occurrence in real time. The moment-to-moment style of description in a narrative vignette gives the reader a sense of being there in the scene. As a literary form the vignette is very old; it was termed *prosographia* by Greek rhetoricians, who recommended that orators include richly descriptive vignettes in their speeches to persuade the audience that the orator's general assertions were true in particular cases.

In the fieldwork research report the narrative vignette has functions that are rhetorical, analytic, and evidentiary. The vignette persuades the reader that things were in the setting as the author claims they were, because the sense of immediate presence captures the reader's attention and because the concrete particulars of the events reported in the vignette instantiate the general analytic concepts (patterns of culture and social organization) the author is using to organize the research report. Such narrative is analytic--certain features of social action and meaning are highlighted, others are presented less prominently or not mentioned at all.

This is an extremely important point; the vignette has rhetorical functions in the report. The task of the narrator is twofold. The first task is didactic. The meaning of everyday life is contained in its particulars, and to convey this to a reader the narrator must ground the more abstract analytic concepts of the study in concrete particulars--specific actions taken by specific people together. A richly descriptive narrative vignette, properly constructed, does this. The second task of the narrator is rhetorical, by providing adequate evidence that the author has made a valid analysis of what the happenings meant from the point of view of the actors in the event. The particular description contained in the analytic narrative vignette both explains to the reader the author's analytic constructs by instantiation and convinces the reader that such an event could and did happen that way. It is the task of more general, synoptic description (e.g., charts, tables of frequency of occurrence) to persuade the reader that the event described was typical, that is, that one can generalize from this instance to other analogous instances in the author's data corpus. I will consider synoptic description more fully later in this discussion.

It follows that both the author and the critical reader should pay close attention to the details of the narrative and to features of its construction. The narrative vignette is based on fieldnotes taken as the events happened and then written up shortly thereafter. The vignette is a more elaborated, literarily polished version of the account found in the fieldnotes. By the time the vignette is written up the author has developed an interpretive perspective, implicitly or explicitly. The way the vignette is written up should match the author's interpretive purposes and should communicate that perspective clearly to the reader. The vignette fulfills its purpose in the report to the extent that its construction as a narrative presents to the reader a clear picture of the interpretive point the author intends by telling the vignette. Even the most richly detailed vignette is a reduced account, clearer than life. Some features are selected from the tremendous complexity of the original event (which contains more information bits than any observer could attend to and note down in the first place, let alone report later) and other features are selected from the narrative report. Thus the vignette does not represent the original event itself, for this is impossible. The vignette is an abstraction, an analytic caricature (of a friendly sort) in which some details are sketched in and others are left out; some features are sharpened and heightened in their portrayal (as in cartoonists' emphasis on Richard Nixon's nose and 5 o'clock shadow) and other features are softened or left to merge with the background.

Two potential aspects of contrast in the narrative convey the empathetic caricature that highlights the author's interpretive perspective: (a) variation in the density of the texture of description (across a sequence of events in time, some of which are described in great detail and some of which are glossed over in summary detail) and (b) variation in the alternatively possible terms used for describing the action itself (selecting some particular nouns, verbs, adverbs, and adjectives rather than others and by this selection pointing to the locally meaningful roles, statuses, and intentions of the actors in the event).

A story can be an accurate report of a series of events, yet not portray the meaning of the actions from the perspectives taken by the actors in the event. Here is a version of a familiar story in which the basic terms of a summary narrative do not convey meaningfulness from the point of view of the characters in the story.

> A young man walked along a country road and met an older man. They quarreled and the young man killed the other. The young man went on to a city, where he met an older woman and married her. Then the young man put his eyes out and left the city.

This version does not tell us about roles, statuses, and the appropiateness of actions, given those roles and statuses. The young man was Oedipus. The older man was not just any older man, but was Oedipus' father, and king of the city. The woman was queen of the city and Oedipus' mother. Thus, actions that generally could be described as killing and marrying entailed parricide and incest at more specific levels of meaning.

In sum, richness of detail in and of itself does not make a vignette ethnographically valid. Rather, it is the combination of richness and interpretive perspective that makes the account valid. Such a valid account is not simply a description; it is an analysis. Within the details of the story, selected carefully, is contained a statement of a theory of organization and meaning of the events described.

One can see that the analytic narrative vignette, like any other conceptually powerful and rhetorically effective instrument, is a potentially dangerous tool that can be used to mislead as well as to inform. The interpretive validity of the form a narrative vignette takes cannot be demonstrated within the vignette itself. Such demonstration is the work of accompanying interpretive commentary, and of reporting other instances of analogous events. In an effective report of fieldwork, key assertions are not left undocumented by vignettes and single vignettes are not left to stand by themselves as evidence. Rather, interpretive connections are made across vignettes and between the vignettes and other more summary forms of description, such as frequency tables.

Direct quotes from those observed are another means of conveying to the reader the point of view of those who were studied. These quotes may come from formal interviews, from more informal talks with the fieldworker on the run (as when during the transition between one classroom event and the next the teacher might say, "Did you see what Sam just did?"), or in a chat at lunch. Quotes may also come from fieldnotes, from what was recorded about the speech of teacher or students, from audiotapes or videotapes made in fieldnotes, or from transcriptions of audiotapes or videotapes made in the classrooms.

Another form for reporting narrative vignettes is the written-up fieldnotes themselves. These can be quoted directly in the report, with the date they were originally taken included. Often a series of excerpts from the notes, written on different days, can warrant the claim that a particular way an event happened was typical--that the pattern shown in the first excerpt from the notes (or shown in a fully finished vignette) did in fact happen often in the setting. This demonstrates *generalizability within the corpus*, substantiating such statements as "Usually when Sam and Mary didn't finish their seatwork the teacher overlooked it, but when Ralph didn't finish he was almost always called to account."

Direct quotes from fieldnotes can also be used to show changes in the fieldworker's perspective across time. This use will be discussed as we consider below the report of the evolution of inquiry in the study.

I have discussed the reporting functions of vignettes, quotes from fieldnotes, and quotes from the speech of participants studied. I have said that to tell a story in a certain way is to present a theory of the organization of the events described and to portray the significance of the events to those involved in them. There is another purpose in choosing and writing up descriptive narratives and quotes. This is to stimulate analysis early on in the organization of data on the way to writing the report. Much has been written about the process of rereading field notes and reviewing audiovisual records to generate analytic categories and to discover assertions and key linkages between one set of observed events and another (see Agar, 1980, pp. 137-173; Becker, 1958; Bogdan & Biklen, 1982, pp. 155-162; Dorr-Bremme, 1984, pp. 151-166; Goetz & LeCompte, 1984, pp. 164-207; Levine et al., 1980; McCall & Simmons, 1969; Schatzman & Strauss, 1974, pp. 108-127; see especially Miles & Huberman, 1984, pp. 79-283).

The leap to narration. A way to stimulate the analysis is to force oneself, after an initial reading through of the whole corpus of fieldnotes and other data sources, to make an assertion, choose an excerpt from the fieldnotes that instantiates the assertion, and write up a narrative vignette reporting the key event chosen. In the very process of making the choices (first of which event to report, second of the alternative regarding descriptive density and the use of alternative descriptive terms), the author becomes more explicit in understanding the theoretical "loading" of the key event that was chosen. Later in the analysis the author may conclude that this was not the best instance of the assertion or that the assertion itself was flawed in some way. Forcing oneself at the outset to make the choices entailed in jumping into storytelling can be a way of bringing to explicit awareness the analytic distinctions and perspectives that were emerging for the author during the course of the time spent in the field.

This awareness can be pushed still further by rewriting the vignette in such a way that it makes an interpretive point that is substantially different from the point of the first version, while recounting the same events reported in the first vignette. Choosing a key event early in the analysis after leaving the field and then writing it up as two different vignettes that make two differing interpretive points is a standard assignment when I teach data analysis and write-up. It teaches the skills of using alternative density of descriptive detail and deliberate choice of descriptive terms to highlight the interpretive point being made. It also forces the analyst to begin to make deliberate analytic decisions. By forcing the analyst to choose a key event, it brings to awareness latent, intuitive judgments the analyst has already made about salient patterns in the data. Once brought to awareness these judgments can be reflected upon critically.

General description. The main function of reporting general descriptive data is to establish the generalizability of patterns that were illustrated in particular description through analytic narrative vignettes and direct quotes. Having presented a particular instance it is necessary to show the reader the typicality or atypicality of that instance--where it fits in the overall distribution of occurrences within the data corpus. Failing to demonstrate these patterns of distribution--to show generalization *within the corpus*--is perhaps the most serious flaw in much reporting of fieldwork research. The vignette shows that a certain pattern of social relationships can happen in the setting, but simply to report a richly descriptive, vivid vignette or to assert in interpretive commentary that accompanies the vignette that this instance was typical or was significant for some other reason (e.g., it was an interesting discrepant case) does not demonstrate to the reader the validity of such assertions about the significance of the instance. This can only be done by citing analogous instances--linking the key event to others like it or different from it--and (a) by reporting those linked instances in the form of vignettes and (b) by showing in summary fashion the overall distribution of instances in the data corpus.

General descriptive data are reported synoptically; that is, they are presented so that they can be seen together at one time. One kind of synoptic reporting medium is the simple frequency table showing raw frequencies, whose patterns of distribution are apparent by inspection. Because the frequency data that are tabulated are often nominal rather than ordinal, two- and three-way contingency tables are often an appropriate way to show patterns to the reader. Fienberg (1977) recommends three-way contingency tables as an especially appropriate way to display these patterns.

Occasionally one may wish to apply inferential statistical tests of significance to the data. Usually, given the conditions of data collection, nonparametric tests, such as chi-square and the Mann-Whitney two-tailed test of rank-order correlation are more appropriate than are parametric statistics. The parametric approaches are usually inappropriate for an additional reason. In standard inferential statistics analysts assume that they do not know the pattern of distribution within a sample. One of the tasks of statistical manipulation is to discover what the patterns of distribution are.

In the analysis of fieldwork data, pattern discovery is done qualitatively. The frequency tables presented to the reader are usually a tabulation of qualitative judgments using nominal scales (or of judgments on ordinal scales involving very low levels of inference in assigning rank or series position to a given instance). In preparing the table as a reporting medium the analyst already knows the pattern of frequency distribution. The analysis is already done; the table merely reports the results of analysis in a synoptic form.

In consequence, manipulation of the data by elaborate inferential statistical methods such as multivariate analysis, multidimensional scaling, or other forms of factor analysis is usually not necessary or appropriate. One example of an appropriate use of multidimensional scaling is in a study whose multiple methods of data collection included a questionnaire survey of teenagers, some of whom had dropped out of schools, others of whom had not (see Jacob & Sanday, 1976).

Interpretive commentary. Accompanying commentary frames the reporting of particular and general description. This commentary appears as three types: interpretation that precedes and follows an instance of particular description in the text, theoretical discussion that points to the more general significance of the patterns identified in the reported events, and an account of the changes that occurred in the author's point of view during the course of the inquiry.

The interpretive commentary that precedes and follows an instance of particular description is necessary to guide the reader to see the analytic type of which the instance is a concrete token. An instance of an analytic narrative vignette or an instance of an extended direct quote contain rich descriptive detail that is multivocal in meaning. Especially in the vignette, but also in quotes from interviews, there is much more semantic content in the text than can be seen at first reading by the audience. Interpretive commentary thus points the reader to those details that are salient for the author and to the meaning interpretations of the author. Interpretive commentary also fills in the information beyond the story itself that is necessary for the reader to interpret the story in a way similar to that of the author. Foreshadowing commentary, like a set of road signs encountered while driving, enables the reader to anticipate the general patterns that are to be encountered in the particulars of the narrative to come. Commentary that follows the particular vignette or quote stimulates the retrospective interpretation of the reader. Both the anticipatory and the subsequent commentary are necessary if the reader is not to be lost in a thicket of uninterpretable detail.

Writing this commentary is necessary for the author as well, since it is precisely the reflective awareness that enables one to write such commentary that enables the writer to be an analyst as well as reporter. A key vignette is relatively easy to select and to write up. What is much more difficult is to probe analytically the significance of the concrete details reported and the various layers of meaning contained in the narrative. Beginning fieldwork reseachers find that the most difficult task in reporting is to learn to comment on the details of the narratives that are presented, using elaborated expository prose to frame the narrative contents of the report.

In fact, alternation between the extreme particularity of detail found in the vignette (or in an exact citation from fieldnotes or in a direct quote from an interview) and the more general voice of the accompanying interpretive commentary is a difficult shift to become accustomed to as a reporter of fieldwork data. It is often necessary in the space of a few adjoining paragraphs (or even sentences) to be very specific descriptively and quite general interpretively. Some beginning fieldworkers resolve this tension by presenting particular description only, with a minimum of interpretation, thus giving any reader but the author a case of semantic and conceptual indigestion--too much richness. Other students attempt to resolve the tension by adopting a voice of medium-general description--neither concrete enough nor abstract enough. This resembles somewhat the "scientific" discourse style of journals in which positivist research is reported. In this voice the author fails to ground the generalizations in particulars and fails as well to take the generalizations far enough theoretically.

Natural history of inquiry. Very often, in article length reports of fieldwork research, and even in monograph-length reports, the author does not include a discussion of the ways in which the key concepts in the analysis evolved or unexpected patterns were encountered during the time spent in the field setting and in subsequent reflection. This is an unfortunate omission from a report of fieldwork research, since the plausibility of the author's final interpretation is greatly enhanced by showing the reader that the author's thinking did indeed change during the course of study.

Fieldwork research presumes that distinctive local meanings will be present in the field setting. These are meanings that could not be fully anticipated by armchair theorizing ("operationalization of indicators of variables") before entering the setting. Because these unknown local meanings and unrecognized dimensions of the research problem cannot be known at the outset, fieldwork is necessary. But as I pointed out in the previous section, the fieldwork researcher is always guided by a general set of research interests and often by a set of quite specific research questions. Given the complexity of the phenomena to be observed in the setting there is ample opportunity to be selective in collecting evidence--finding only those data that confirm the author's initial hunches and ideological commitments.

I have discussed the research process as the search for falsification. It is the author's responsibility to document this process for the reader, to show in considerable detail (a) that the author was open to perceiving, recording, and reflecting on evidence that would disconfirm the author's preconceived notions and commitments (as evidenced by the fact that the author's thinking and data collection did change during the course of the study) and (b) specific ways in which the changes in interpretive perspective took place. A good way to show this is by writing a first-person account of the evolution of inquiry before, during, and after fieldwork.

Primary evidence for this change in perspective comes from the corpus of fieldnotes and the original research proposed. If the notes contained formal statements of the research questions, dated quotes from the notes can reveal changes in the questions across time. The final set of research questions and issues can be contrasted with those found in the initial proposal. Dated analytic memos written "to the file" during the course of the research can be an additional source of evidence for changes in the researcher's interpretive perspective. A synoptic chart can be an effective way to display these changes in thinking. Another way in which the fieldnotes can be used to illustrate shifts in interpretive perspective is by analyzing the texture of description found in the notes before and after major intellectual turning points in the inquiry.

Audiences and their diverse interests. I have discussed generic issues of audience interest in the previous sections on data collection, analysis, and reporting. For any reader, the report must (a) be intelligible in the relations drawn between concrete detail and the more abstract level of assertions and arguments made by linked assertions, (b) display the range of evidence that warrants the assertions the author makes, and (c) make explicit the author's own interpretive stance and the grounds of that stance in substantive theory and personal commitments. Presenting all this enables the reader to act as a coanalyst with the author.

In addition to these general concerns of a universal reader, there are more particular concerns of specific audiences that should be kept in mind by the researcher in preparing a report. There are at least four major types of audience, each with a distinctive set of salient interests: (a) the general scientific community (fellow researchers), (b) policy makers (central administrators in the school district, state and federal officials), (c) the general community of practitioners (teachers, principals, and teacher educators), and (d) members of the local community that were studied (teachers, students, building principal, parents). It is often advisable to prepare different research reports to address the specific concerns of the different audiences. Let us review these differing kinds of concerns.

The most salient concerns of the general scientific community involve the scientific interest and adequacy of the study. If the problem addressed in the study is seen as intellectually significant and if the assertions and interpretations that were made seem warranted by the evidence presented, the interests of the scientific community are met. These interests are essentially technical.

The most salient concerns of policy makers have to do with generating policy options and making choices among them. Here the central interest is not in the technical adequacy or intrinsic scientific merit of the study, but in how the study can inform the current decision situation of the policy maker. Given the labor-intensive, long-term nature of fieldwork research, it might appear that this approach is usually of little use to policy makers in current decision making, since by the time the fieldwork study is completed, the decision situation will have changed considerably (cf. Mulhauser, 1975).

A more appropriate role for fieldwork research in relation to policy audiences is to inform the generation of options by pointing to aspects of the practical work situation that may have been overlooked by policy makers. A fieldwork research report can help the policy maker see what a specific aspect of the work of teaching looks like up close; what the practical constraints and opportunities for action are in the everyday world of life in a specific classroom, in a specific school building, in a specific community. This is why fieldwork studies of implementation have been useful; they identify unintended consequences of implementation, unanticipated barriers to it, unrecognized reasons why it was successful in a particular setting. Such reporting can help policy makers develop new conceptions of policy and generate a wider range of options than they had previously conceived of. To say to a policy maker caught in trying to decide between option *x* and option *y* that options *a* and *b* are also available can be of considerable benefit.

Lest the picture be painted too rosily, however, it should be noted that fieldwork research, by uncovering practical details of everyday work life that may be inhibiting or fostering the implementation of generally defined policies, can present information to policy makers that they find frustrating. Indeed, the core perspective of fieldwork research can be seen as fundamentally at odds with the core perspective of policy makers. The core perspective of fieldwork research is that fine shadings of local meaning and social organization are of primary importance in understanding teaching. The core perspective of general policy makers is that these fine shadings of local detail are less important than the general similarities across settings; at best this is insignificant random error, at worst it is troublesome noise in the system that needs to be eliminated if the system is to operate more effectively.

The conclusions of fieldwork research usually point to the rationality of what is often considered organizationally irrational behavior by administrators and policy makers. The main message of a fieldwork research report to a policy audience, then, is likely to be one of cognitive dissonance. It is important that the researcher realize this in designing a report for a policy audience.

The most salient concerns of a general audience of practitioners have to do with deciding whether or not the situation described in the report has any bearing on the situation of their own practice. The interests of practitioners can be pejoratively characterized as a desire for tips and cookbook recipes--prescriptions about "what works." This notion of what practitioners want is too simplistic. Practitioners may say they want tips, but experienced practitioners understand that the usefulness and appropriateness of any prescriptions for practice must be judged in relation to the specific circumstances of practice in their own setting. Thus the interest in learning by positive and negative example from a case study presupposes that the case is in some ways comparable to one's own situation.

Another way to state this is to say that a central concern for practitioners is the generalizability of the findings of the study. This is not a matter of statistical generalization so much as it is a matter of logical generalization (the distinction is that of Hamilton, 1980). The responsibility for judgment about logical generalization resides with the reader rather than with the researcher. The reader must examine the circumstances of the case to determine the ways in which the case fits the circumstances of the reader's own situation.

Practitioners can learn from a case study even if the circumstances of the case do not match those of their own situation. This is possible for the practitioner only if the circumstances of the case are described clearly and specifically by the researcher. Thus the problem of inadequate specificity mentioned in the previous section is a technical issue in data collection and reporting that affects the usefulness of the case study to audiences of practitioners.

For the last type of audience to be considered here, members of the local community that was studied, issues of central concern are of a different order from those of the previous types of audiences that have been considered. I use the term *community* loosely here to refer to the network of persons who interact directly, or no more than one or two steps removed from direct interaction, in the delivery of instruction to children. That set of persons includes the teachers and students themselves, the building principal and any other building-level staff, staff who visit the school to deliver instruction or to supervise teachers, and the parents of the children. In a small school district this set might also include the central office administrators, school board members, and leaders of key interest groups of citizens in the school district.

For these members of the local school community there are a variety of personal concerns with the information the fieldwork research report contains. They are not only concerned with the scientific interest and adequacy of the study. The issue of generalization to their own situation does not apply to them, since this is their case. What does apply, powerfully, is that individually and in various collectivities, their personal and institutional reputations are at stake in their portrayal by the researcher in the report. It is extremely important that the researcher keep this in mind in preparing a report, or a set of reports, to individuals and groups within the local community that was studied. If the information presented in the report is to be of use to them--if they are to be able to learn by taking a slightly more distanced view of their own practice--the reports must be sensitive to the variety of personal and institutional interests that are at stake in the kinds of information that are presented about people's actions and thoughts and in the ways these thoughts and actions are characterized in the reports.

One can distinguish four major types of information that have different kinds of sensitivity in reports to audiences of members of the local community. These four types, or domains of information lie along two major lines of contrast: (a) that between information that is news, or not news, and (b) that which if known would be positively, neutrally, or negatively regarded.

The distinction between news and that which is not news involves conscious awareness by the audience of the information contained in the report. Much of what is contained in a report of fieldwork research that is written to a general, nonlocal audience is information that local members already know. Because of the transparency of everyday life to those involved in it, however, a good deal of the contents of the fieldwork report may be perceived as news by members of local audiences. What is news to one local member may not be news to another; for example, what the teacher knows as a commonplace reality of everyday work in the classroom may not be known at all (or may be understood in a different way) by the principal or by parents.

The distinction between information that might be negatively regarded and that which might be positively or neutrally regarded points to the differential sensitivity of different information to different actors in the local setting. One way to view social organization is in terms of patterns of access to or exclusion from certain kinds of information. In organization theory since Weber we have seen that lines of power and influence are drawn along lines of differential access to information. Thus basic political interests are at stake in the revelation or concealment of certain items of information among local audiences. The researcher needs to keep these interests in mind in preparing reports for local audiences.

Figure 2 can be a useful heuristic in making strategic decisions about what to include in a report to a local audience and how to characterize what is presented in the report. The contingency table displays four major types of information across the two dimensions of contrast just discussed.

Type 1 information is that which is already known to some or all of the members of the local setting and that is either positively or neutrally regarded, that is, not negatively regarded. This type of information is sensitive not because it might jeopardize the reputation of any individual or group in the setting; rather, Type 1 information puts the reputation of the researcher at risk, since it can be dismissed as trivial by local members, for whom this information is not news. They may see such information as unimportant, unless it is carefully framed in the report. An example of such information is the assertion that there are approximately 27 children to every

	Information known	Information unknown
Positively (or neutrally) regarded	Type 1	Type 3
Negatively regarded	Type 2	Type 4

Figure 2. Types of information in reports to local audiences.

adult in early grades classrooms in which the teacher does not have a full-time aide. On the face of it, this seems an obvious bit of information that is also trivial. One can imagine a local audience reading this in a report and thinking, "This researcher spent six months in our building, and that's all she has to say about what early grades classrooms are like? Of course, children vastly outnumber adults in classrooms; everyone knows that."

The fact that an early grade classroom is a crowded social space in which children vastly outnumber adults is not at all trivial. It is one of the most important social facts about classrooms, considered as an institutionalized set of relations among persons. In no other setting in daily life does one encounter such an adult-child ratio, sustained each day for approximately five hours. In addition, authority is radically asymmetric in these crowded conditions, as illustrated by an observation of Sommer (1969, p. 99) who notes that despite the crowding, teachers have 50 times more free space than do students, and teachers also have more freedom to move about in their classroom territory. Profound realities about the daily work of teaching--realities involving information overload and what might be called person overload--are entailed in this statement about the adult-child ratio in the early grades classroom. To report such an item of information to a local audience without considerable interpretive framing to highlight the significance of the social fact, however, is to risk having the credibility of the researcher's work dismissed by the local audience. The researcher needs to attend to this when presenting Type 1 information in a report to the local audiences, and also when writing to general audiences of practitioners and policy makers.

Type 2 information is that which is already known to all or some local members and is negatively regarded. This is perhaps the most sensitive type of information to present in a report to a local audience. Often members of the local community have developed informal or formal social organizations around such information--ways of avoiding dealing with it, ways of concealing it. This type of information is the proverbial skeleton in the closet that everyone knows is there. An example is the item of information that one reason teachers' work takes the form it does in a particular building is because the principal is an alcoholic. Everyone in the building knows this, and most of the staff are involved in covering for the principal. Considerable effort goes into this social organizational work, effort that could be made use of in more educationally productive ways.

For a general audience of practitioners or policy makers, information about the principal's addiction problem might be a social fact that is crucial to interpretation of social organization in the setting. Moreover, since alcoholism among school staff is not an isolated phenomenon, general audiences may find the opportunity to reflect on this issue in the case study very useful as a stimulus to taking a slightly more distanced view of the phenomenon of addiction and its influence on social organization in their own setting. If strict confidentiality can be maintained, the Type 2 information would not be at all inappropriate for reporting to a general audience. To a local audience--at least to some individuals and groups in the local setting, such information could be very provocative. Usually it seems wise to censor entirely such information in reports to local audiences, unless the information is essential to a key assertion or interpretation in the study. In that case, the information might be reported to some actors in the setting and not to others. It is impossible to stress too strongly the need for care in presenting Type 2 information in reports in the local setting.

Type 3 information is that which is not known by members of the local community and which, if known, would be positively regarded. This type of information presents the least problems in reporting of all the four types discussed here. Still, some strategic considerations apply in presenting Type 3 information. Members of the local community are pleased by this information; they discover things that work in their setting that they were not aware of, or they discover new aspects of what works, and this helps them think about the organization of other activities that don't work the way they want them to. Thus the presentation of Type 3 information has important teaching functions in the report to a local audience.

One teaching function is that Type 3 material can be used as positive reinforcement in the report. Type 3 material is a reward to the reader who is a member of the local community--it can influence the reader to continue reading the report. Moreover, Type 3 information is justly rewarding. The researcher is not simply flattering those studied; they have a right to know this type of information about themselves. Because of the function of Type 3 material as positive reinforcement, and because it does not jeopardize the individual and collective self esteem of members of the local community, Type 3 information can be alternated in the report with Type 4 information, which is negatively regarded, once known. Type 3 information can prepare the way for members of the setting to begin thinking about more unpleasant information, or to think about Type 1 information, which if properly framed can stimulate new insights into the taken-for-granted, but which, since it is not news does not stimulate the pleasurable reaction that follows from learning Type 3 information. Since Type 3 material is genuinely good news it is an important pedagogical resource for the researcher in preparing a report for an audience of those who were studied.

Another more substantive function of presenting Type 3 material is that it can stimulate deeper reflection into everyday practice in the setting--new aspects of the organization of social relations and meaning perspectives of participants that reduce student resistance to learning, or make for greater clarity and comprehensiveness in the presentation of subject matter, foster greater justice in the relations between teacher and student and among students, or channel intrinsic interest and motivation on the part of students and teachers. These are basic issues in the organization of instruction in classrooms and in a school building as a whole that warrant reflection by participants in that setting. To stimulate this reflection Type 3 information should be highlighted in the report, possibly by reporting some of it first, possibly also by reporting Type 3 information on a topic that the researcher has discovered is of current interest in the setting. In the report, the underlying organizational issues should be stressed, for example, the local definitions of justice in social relations, the local definitions of intrinsic interest, the features of presentation of subject matter that are locally regarded as clear and understandable. Having raised such issues by reporting items of Type 3 material, the researcher can then use those topics in the report as a bridge for the presentation of Type 4 material. Because of the connection between Type 3 and Type 4 material within a common topic, the sensitivity of Type 4 material can be reduced by placing it in the context of information that is positively regarded.

Type 4 material is that which is not currently known in the setting and that if known would be negatively regarded. This kind of information needs to be handled with care in the report, but it is by no means impossible to present to local audiences. It is not so potentially explosive as Type 2 material, since participants in the setting, being unaware of it, have not organized ways to keep it away from the light of scrutiny. Still, Type 4 information can at the least threaten the self esteem of individuals and of networks of individuals in the setting. In some cases this information can be extremely sensitive. It may be wise to exclude some of this information from reports to some of the audiences in the setting. What one might say in a confidential report to the teacher that was studied, for example, one might want to leave out of the report that was to be read by the principal or by parents. To make these kinds of strategic decisions the researcher needs to apply the same standards for assessing risk to those studied that were discussed in the previous section under the topic of negotiating entry. Those with the least power in a setting are usually those least at risk for embarrassment or administrative sanction by the revelation of Type 4 information--but not always. The researcher's basic ethnographic analysis of the setting can shed light on these strategic issues in reporting.

The researcher's role in the setting is also an important consideration in dealing with Type 4 information. If the researcher were doing advocacy research on behalf of a particular interest group in the setting (e.g., teachers, parents) one might present more Type 4 information or one might handle it less tenderly than if one had negotiated access to the setting by agreeing to address the interests of a broader array of interest groups.

Even if Type 4 information is not especially sensitive for key individuals in the setting, it still should be handled judiciously in a report to a local audience. The reasons for this are pedagogical as well as ethical.

Some of these reasons were introduced in the discussion of Type 3 material. Generic issues that can be illustrated by negative example with Type 4 material can be presented first as positive examples by reporting Type 3 material. This makes the relatively bitter pill of Type 4 information easier to swallow and can reduce the defensiveness of members of the local community to the more unpleasant aspects of the report. It would be pedagogically ineffective to introduce an important topic in the report by presenting a whole series of instances of Type 4 information, in vivid narrative vignettes and striking quotes from interviews. This would be hard for people to take, and when without dissimulation a researcher can present bad news in the context of good news, this seems the much wiser course.

To conclude, reporting to local audiences can be thought of as a process of *teaching the findings*. In doing so, the researcher takes an active stance toward the audience, considering the audience as client. As in any teaching, it is crucial to assess the current state of the learner's knowledge and to assess the sensitivity of the learning task--its potential for embarrassment or difficulty. All learning involves risk, and in designing instruction any teacher needs to consider the risks from the student's point of view. In this sense, teaching requires an ethnographic perspective toward the learners and toward the learning environment. Because of this the fieldwork researcher is in an unusually good position to be a teacher of the findings of the study, if s/he chooses to take on that role with audiences of those who were studied. The very process of data collection and analysis that makes it possible to report valid information at the end of a fieldwork study provides the data relevant to decisions about how to teach the findings.

In applied research, and especially in reporting to local audiences of those studied, the single report in the form of a monograph-length ethnography is probably obsolete. Multiple reports of varying length, each designed to address the specific interests of a specific audience, are usually more appropriate. Nor is writing the only medium of reporting. In the local setting oral reports at meetings, and mixing oral and written reporting in workshops, can be effective ways to teach the findings. For an individual teacher that was studied, reviewing a set of field notes or a videotape with the researcher can be a valuable experience in continuing education.

Whether the report to a local audience takes oral or written form the researcher should invite critical reactions from the audience. Dialogue between the researcher and those studied provides the researcher with an opportunity to learn as well as providing those studied an opportunity to learn. The validity check that comes from this dialogue can be of great value to the researcher. It can inform revisions in reports. It can stimulate the researcher to rethink the basic analysis itself. One of the problems in reporting to general audiences is that the writer does not usually get this kind of feedback. In teaching the findings to local audiences, such dialogue is intrinsic to the reporting process.

Conclusion Toward Teachers as Researchers

Interpretive research is concerned with the specifics of meaning and of action in social life that takes place in concrete scenes of face-to-face interaction and in the wider society surrounding the scene of action. The conduct of interpretive research on teaching involves intense and ideally long-term participant observation in an educational setting, followed by deliberate and long-term reflection on what was seen there. That reflection entails the observer's deliberate scrutiny of his/her own interpretive point of view and its sources in formal theory, culturally learned ways of seeing, and personal value commitments. As the participant observer learns more about the world *out there* s/he also learns more about him/herself.

The results of interpretive research are of special interest to teachers, who share similar concerns with the interpretive researcher. Teachers too are concerned with specifics of local meaning and local action; that is the stuff of life in daily classroom practice. In a recent review article titled "Toward a More Effective Model of Research on Teaching," Bolster (1983) argues on the same grounds presented in this paper. He uses the terms *sociolinguistic* and *symbolic interactionist* as labels for interpretive approaches to research on teaching and argues that these approaches have special relevance for classroom teachers.

Bolster's argument is especially telling because of his situation as an experienced public school teacher who for 20 years was also simultaneously a university-based teacher educator. Bolster's career as a teacher has been a prototype for new roles for experienced teachers; he has shown one way of being a master teacher. He spent mornings as a junior high school social studies teacher in Newton, Massachusetts, and spent afternoons as a professor of education at Harvard University. For him the radically *local* character of classroom teaching was a compelling reality. He found that interpretive research took account of that dimension of teaching practice (Bolster, 1983):

> The more I became aware of and experienced with this methodology, the more I became convinced that of all the models of research I knew, this model has the greatest potential for generating knowledge that is both useful and interesting to teachers . . . this approach focuses on situated meanings which incorporate the various reactions and perspectives of students. In common with the teachers' perspective, it assumes the multiple causation of events: the classroom is viewed as a complex social system in which both direct and indirect influences operate. Unanticipated contingencies potentially illuminate rather than confound understanding since reaction to the unexpected often highlights the salient meanings assigned to what is normal.
>
> Most important of all, symbolic interactionist research in classrooms necessarily relies heavily on the teacher's interpretation of events. The relationship between teacher and researcher as colleagues, therefore, is more perceptive than political, and each has individual and professional reasons for nourishing and extending it. (pp. 305-306)

The inherent logic of the interpretive perspective in research on teaching leads to collaboration between the teacher and the researcher. The research subject joins in the enterprise of study, potentially as a full partner. In some of the most recent work (e.g., Florio & Walsh, 1980) the classroom teacher's own research questions--about particular children, about the organization of particular activities--become the focus of the study.

It is but a few steps beyond this for the classroom teacher to become the researcher in his or her own right. As Hymes (1982) notes, interpretive research methods are intrinsically democratic; one does not need special training to be able to understand the results of such research, nor does one need arcane skills in order to conduct it. Fieldwork research requires skills of observation, comparison, contrast, and reflection that all humans possess. In order to get through life everyone must do interpretive fieldwork. What professional interpretive researchers do is make use of the ordinary skills of observation and reflection in especially systematic and deliberate ways. Classroom teachers can do this as well by reflecting on their own practice. Their role is not that of the participant observer who comes from the outside world to visit, but that of an unusually observant participant who deliberates inside the scene of action.

A future for interpretive research on teaching could be that the university-based researcher gradually works him/herself out of a job. That is a slight rhetorical exaggeration; there is still a need for outsiders' views of classrooms and of teaching practice. In some ways the teacher's very closeness to practice, and the complexity of the classroom as a stimulus-rich environment, are liabilities for reflection. Kluckhohn's aphorism, mentioned at the outset of this paper, can be recalled here at its close: The fish might indeed be the last creature to discover water.

The university-based researcher can provide valuable distance--assistance to the classroom teacher in making the familiar strange and interesting. This can be done by the university-based researcher as a consultant, as a continuing educator of experienced teachers. The teacher, as classroom-based researcher, can learn to ask his/her own questions, to look at everyday experience as data in answering those questions, to seek disconfirming evidence, to consider discrepant cases, to entertain alternative interpretations. That, one could argue, is what the truly effective teacher might do anyway. The capacity to reflect critically on one's own practice and to articulate that reflection to oneself and to others can be thought of as an essential mastery that should be possessed by a master teacher.

Teachers in public schools have not been asked, as part of their job description, to reflect on their own practice, to deepen their conceptions of it, and to communicate their insights to others. As the teaching role is currently defined in schools, there are external limits on the capacity of a teacher to reflect critically on his/her own practice. There is neither time available nor an institutionalized audience for such reflection. The lack of these opportunities is indicative of the relative powerlessness of the profession, outside the walls of the classroom.

This is not the case, to the same degree, in other professions. For physicians and lawyers, and even for some nonelite professions more similar to teaching such as social work, it is routine for practitioners to characterize their own practice, both for purposes of basic clinical research and for the evaluation of their services. For example, surgeons often dictate a narrative description of the procedures used during an operation. After this narrative is transcribed and filed it can be reviewed by colleagues for purposes of evaluation, and it is available as documentation in the event of a malpractice suit. The social worker writes process notes on interviews with clients; these notes are then available for evaluation and consultation by supervisors. By contrast, the teacher's own account of his or her practice has no official place in the discourse of schooling, particularly in teacher evaluation, staff development, and/or debates about the master teacher role and merit pay that have been stimulated by recent reports and proposals for educational reform (e.g., Goodlad, 1984; National Commission on Excellence in Education, 1983).

If classroom teaching in elementary and secondary schools is to come of age as a profession--if the role of teacher is not to continue to be institutionally infantalized--then teachers need to take the adult responsibility of investigating their own practice systematically and critically by methods that are appropriate to their practice. Teachers currently are being held increasingly accountable by others for their actions in the classroom. They need as well to hold themselves accountable for what they do and to hold themselves accountable for the depth of their insight into their actions as teachers. Time needs to be made available in the school day for teachers to do this. Anything less than that basic kind of institutional change is to perpetuate the passivity that has characterized the teaching profession in its relations with administrative supervisors and the public at large. Interpretive research on teaching, conducted by teachers with outside-classroom colleagues to provide both support and challenge, could contribute in no small way to the American schoolteacher's transition to adulthood as a professional.

It is appropriate to conclude with a narrative vignette and some interpretive commentary on it. During 1981 and 1982 a set of jokes became popular in the United States concerning activities that "Real Men" did or did not engage in, because the activities were considered effete and unmasculine. The first of the jokes to have currency was "Real Men don't eat quiche."

In the winter of 1982 a well-known practitioner of process-product research on teaching sent brief notes to colleagues around the country containing the following one-liner, which the researcher claimed to have found very amusing: "Real Men don't do ethnography."

On a winter morning as I arrived at the mailboxes of the staff of the Institute for Research on Teaching (IRT) where I work, two of my IRT colleagues gleefully showed me the note, which had just arrived in the mail. I too found the joke amusing, but not for the same reasons as those that may have been held by the author of the note.

One reason the joke seemed funny to me was because of its apparent presuppositions about power in social research--presuppositions of which the author of the note seems to have been unaware. One presupposition is that of prediction and control as the aim of nomothetic science. Another presupposition involves the power relations that are presumed to obtain between the social scientist, as the producer of assertions whose authoritativeness rests on their predictive power, and the various audiences to which those assertions are addressed. In the case of research on teaching, these audiences include government officials, curriculum developers, school administrators, teachers, parents, and the general citizenry.

The primary role of researchers on teaching who are Real Men, as defined by the standard approach to educational research and dissemination, seems to be to make statements about the general effectiveness of various teaching practices. The primary audience for these statements is those placed in relatively high positions in the hierarchy of educational policy formation and implementation: federal and state officials, curriculum developers and publishers, local school administrators (especially central office staff who relate directly to the school board), and teacher educators. It is the role of these audiences to communicate the prescriptions of research on teaching regarding effective practice to the primary service deliverers in the school system--teachers and building principals. These service deliverers, in turn, are to communicate the prescriptions to individual parents as justifications for the classroom practices of the teacher who teaches their child.

Perhaps Real Men don't do interpretive research on teaching because they are unwittingly, or wittingly, committed to existing power relations between technical experts and managers and the front-line service providers and receivers of services in the institution of American schooling. In those existing arrangements, statements about "what works" in general, derived from positivist research conducted across many classrooms, can carry considerable weight with audiences of higher-level decision makers. Even if such statements turn out in the long run to have been wrong, in the short run they serve to support belief in the fundamental uniformity of practice in teaching. Such belief is functional for decision makers, since it justifies uniform treatment by general policy mandates that are created by centralized decision-making and implemented in "top-down" fashion within the existing social order.

More decentralized, "bottom-up" decision making that granted more autonomy to front-line service providers in the system would change the current distribution of power in educational institutions. The appropriateness of such "bottom-up" change strategies is suggested in the theoretical orientations and in the growing body of empirical findings of interpretive research on teaching. Such research, while it does not claim to speak in a voice of univocal, positive truth, can make useful suggestions about the practice of teaching, since although no interpretive assertions can be conclusively proven, some lines of interpretation can be shown systematically to be false. Paradoxically, the chief usefulness of interpretive research for the improvement of teaching practice may be its challenge to the notion that certain truths can be found and in its call to reconstrue fundamentally our notions of the nature of the practical in teaching.

Interpretive research on teaching, then, is not only an alternative method, but an alternative view of how society works and of how schools, classrooms, teachers, and students work in society. Real Men may be justified in not wanting to do ethnography, for in the absence of general belief in social science as a means of determining positive truth it is difficult for the social scientist to operate in society as a mandarin, or philosopher-king. The key issue for that kind of Real Man in educational research may not be teacher effectiveness, but researcher effectiveness, narrowly construed.

Another view of the future is that it could be a place in which interpretive work is a creatively subversive activity in the field of education. Real Women and Men who are schoolteachers, principals, parents, and students, as well as those who are university-based scholars, might find themselves doing ethnography, or whatever one might want to call it, as a form of continuing education and institutional transformation in research on teaching.

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